

**CPFilms Inc:** 

PO Box 5068 Martinsville Virginia 24115 (276) 627-3000

November 30, 2015



### FEDEX OVERNIGHT MAIL

Ms. Lynn V. Wise Senior Environmental Engineer DEQ Blue Ridge Regional Office – Roanoke 3019 Peters Creek Road Roanoke, VA 24019

Subject:

**VPDES Permit Renewal Application** 

VPDES Permit No. VA0072354

Dear Ms. Wise:

Enclosed with this letter is the original of the permit application to renew VPDES Permit No. VA0072354. This application has been certified by my Plant Manager, Pat Caldarera.

Also, included with this application are the completed Public Notice Billing Information and the facility status questionnaire for cooling tower intake structures (Section 316(b) in the Clean Water Act).

I will submit by email the electronic version to your attention.

If you have any questions, please do not hesitate to contact me at 276-627-3373.

Sincerely,

John Martinez

**Environmental Specialist** 

### PUBLIC NOTICE BILLING INFORMATION

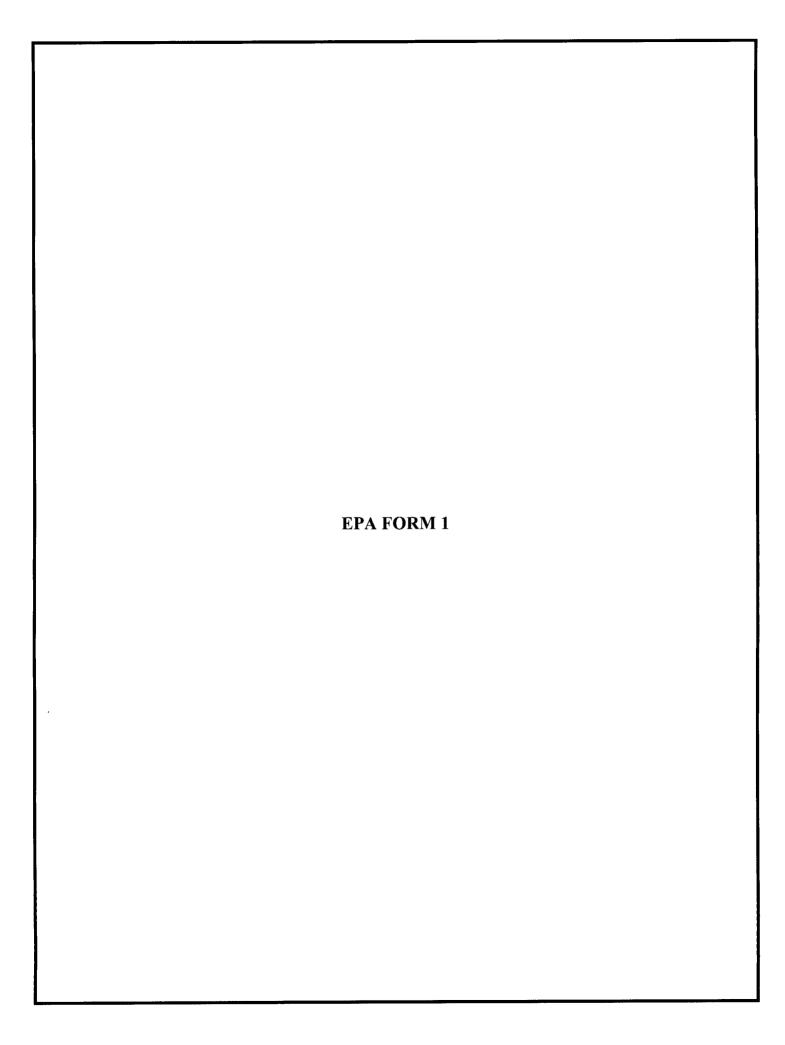
I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in accordance with 9 VAC 25-31-290.C.2.

Agent/Department to be billed:	CPFilms Inc.
Owner:	CPFilms Inc.
Agent/Department Address:	4210 The Great Road
	Martinsville, VA 24089
Agent's Telephone No.:	276-627-3000
Printed Name:	Pat Caldarera, Plant Manager
Authorizing Agent – Signature:	Pat Calden
Date:	11/30/2015

VPDES Permit No. VA0072354 CPFilms, Inc.

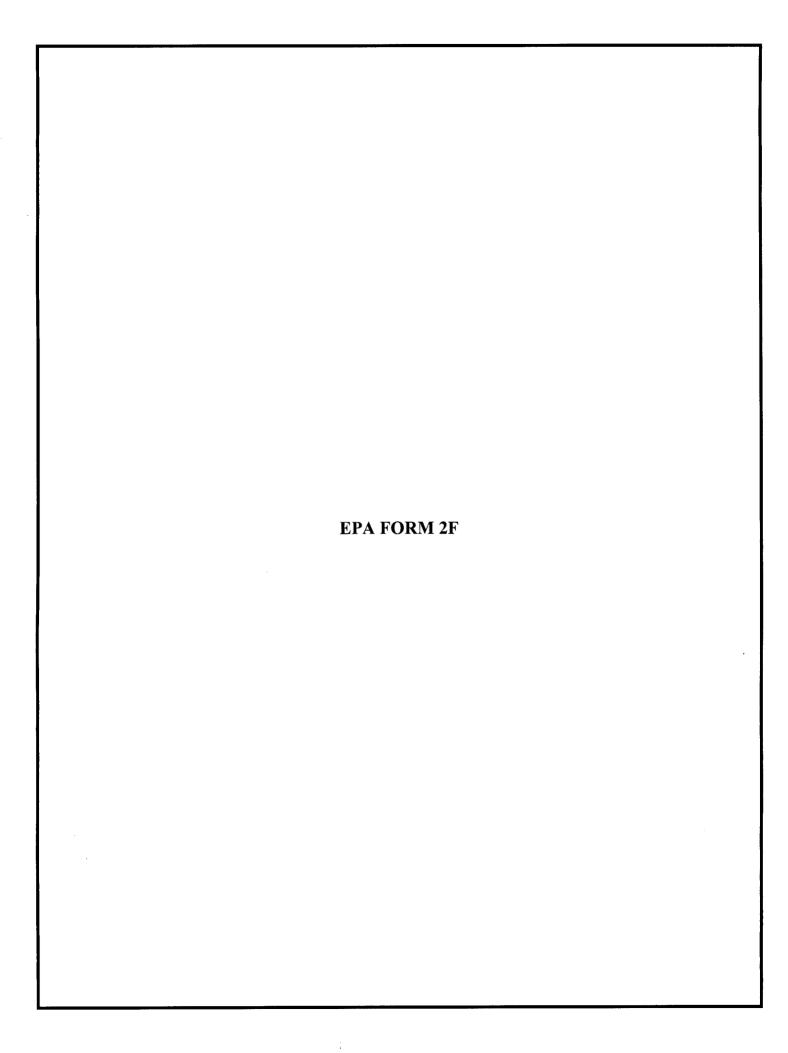
Please return to: Virginia Department of Environmental Quality

Blue Ridge Regional Office 3019 Peters Creek Road Roanoke, VA 24019 Attn: Lynn V. Wise



FORM					TION AGENCY				. NUMBER			
	DA GE	GENERAL INFORMATION  Consolidated Permits Program						<u> </u>	VA00723	E A		T/A C
GENERAL	/Read				ogram oefore starting)			F 2	VA00123	<del>)4</del>		13 14 15
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II. EPA I.D. NUMBER							d a	esignated pla ny of it is inco	abel has been possible. Review the rrect, cross throappropriate	inform: ugh it a	ation o	carefully; if nter the
	4								eprinted data is			
V. ADDRESS	PLEASE PLA	ACE	E L/	ABEL	IN THIS S	PACE	<b>=</b> a b n b	ppear), pleas elow. If the la ot complete it e completed r	space lists the integration of the provide it in the list complete ems i, ii, V, Vi (regardless). Co	e propo and co except mplete	er fill-i arrect, VI-B i all ite	n area(s) you need which must ems if no
VI. FACILITY LOCATION							d	etailed item d	provided. Refe escriptions and under which this	for the	legal	
II. POLLUTANT CHARACTERIS												
INSTRUCTIONS: Complete A thr this form and the supplemental for to each question, you need not su	rm listed in the parenthesis follow	wing th	e que	stion. Marl	"X" in the box in th	e third colu	umn if the	supplementa	il form is attache	ed. If y	ou an	swer "no"
Section D of the instructions for de		uy unc		10 11 your c	on the change of			,				,
00001510.0	UEOTIONO	Г.,	MAR			60501	IEIC OLIEG	TIONS			MAR	K "X" FORM
SPECIFIC Q		YES	NO	FORM ATTACHED			IFIC QUES			YES	NO	ATTACHED
	owned treatment works which to waters of the U.S.? (FORM		x		concentrated production fa	animal fe	eding o	peration or a	osed) include a aquatic animal ge to waters of		x	
C to this or for 10th or high	and the second second	16	17	18	the U.S.? (FOI D. Is this a propos		(other th	an those des	cribed in A or B	19	20	21
	rrently results in discharges to than those described in A or B		- 1	X					rs of the U.S.?		X	
above? (FORM 2C) FOI	RM 2F	16	17	18	(FORM 2D)					19	20	21
E. Does or will the facilit hazardous wastes? (FO	ty treat, store, or dispose of RM 3)		x		quarter mile of	the lower	rmost str	atum contain	ial or municipal ing, within one rces of drinking		х	•
0.0		16	17	18	water? (FORM H. Do you or will y		at this foo	ilih, fluida for a	annoin!	19	20	21
G. Do you or will you inject water or other fluids which connection with convention, inject fluids used	) - -	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)						x				
natural gas, or inject hydrocarbons? (FORM 4	fluids for storage of liquid	16	17	18						19	20	21
Is this facility a proposed     of the 28 industrial cate     and which will potentially     air pollutant regulated ur	stationary source which is one gories listed in the in-structions y emit 100 tons per year of any nder the Clean Air Act and may attainment area? (FORM 5)		x		of the 28 indo which will pote	ustrial cate intially emit er the Clea	egories li t 250 tons in Air Act	isted in the i s per year of a and may affe	nich is NOT one nstructions and any air pollutant ct or be located		x	
		16	17	18		,	,			19	20	21
III. NAME OF FACILITY												
SKIP CPFILMS INC.												
15 16 29 30		***								69		
IV. FACILITY CONTACT	A. NAME & TITLE (last, fin	et & tit	Ha)				ВР	HONE (area co	de & no.)			
	ENVIRONMENTAL S			ST		45 4	276	<b>627</b>	3373			
V. FACILITY MAILING ADDRES												
2 4210 THE GREAT	A. STREET OR P.O. E	вох										:
15 16	B. CITY OR TOWN				C. STATE	D. ZIP	CODE					
C MARTINSVILLE					40 VA	240						
15 16 VI. FACILITY LOCATION					~[ ] 41 42]	- Lii.	31					
A.	STREET, ROUTE NO. OR OTHER S	PECIFI	IC IDEN	ITIFIER								
c 5 4210 THE GREAT I	ROAD					45						
	B. COUNTY NAME											
HENRY 46					70							
	C. CITY OR TOWN				D. STATE	E. ZIP	CODE	F. COUNTY C				
6 FIELDALE					VA (1) (2)	240	) <b>89</b>	52	54			
15 16 EPA Form 3510-1 (8-90)					40 41 42	17'	51	1 02	J-7 1	CONT	INUE	ON REVERSE

VIII SIC CODES (4 digit in order of priority)		···
VII. SIC CODES (4-digit, in order of priority)		
A. FIRST		B. SECOND
3083 (Specify) LAMINATED PLASTICS PLATE, SHEET, AND PROFILE SHAPES	7 7	(specify)
15 16 19 C. THIRD	15 16 19	D. FOURTH
C. THIRD	cl	(specify)
7	7	
15 16 19 VIII. OPERATOR INFORMATION	15 16 19	
	AME	B. Is the name listed in Item VIII-
C OPEN MO INC	*	A also the owner?
CPFILMS INC.		X YES NO
15 16	// // // // // // // // // // // // //	58 66  D. PHONE (area code & no.)
C. STATUS OF OPERATOR (Enter the appropriate letter into the	(/6.)	
F = FEDERAL M = PUBLIC (other than federal or state) S = STATE O = OTHER (specify)	P (specify)	276   627   3000
P = PRIVATE	56	15 16 18 19 - 21 22 - 25
E. STREET OR P.O. BOX		
2410 THE GREAT ROAD		
26	55	
F. CITY OR TOWN	G. STATE	H. ZIP CODE XI. INDIAN LAND
С		Is the facility located on Indian lands?
B FIELDALE	VA	24089 YES X NO
15   16 X. EXISTING ENVIRONMENTAL PERMITS	40 41 42	47 51 52
	D (Air Emissions from Proposed Sources)	
C T I		
9 N VA0072354 9 P 15 16 17 18 30 15 16 17 18		30
B. UIC (Underground Injections of Fluids)	E. OTHER (specify)	
	000745066	(specify)
9 U 9 VMF 15 16 17 18 30 15 16 17 18	RC8715866	WATER INTAKE PERMIT
C. RCRA (Hazardous Wastes)	F. OTHER (specify)	(specify)
9 R VAD066008780/VAD108517491 9 WCI	RO-30294	
15 16 17 18 30 15 16 17 18		TITLE V AIR PERMIT
XI. MAP		
Attach to this application a topographic map of the area extending to a	it least one mile beyond property b	coundaries. The map must show the outline of the facility, the
location of each of its existing and proposed intake and discharge stru	ctures, each of its hazardous was	te treatment, storage, or disposal facilities, and each well where
it injects fluids underground. Include all springs, rivers, and other surfa	ace water bodies in the map area.	See instructions for precise requirements. SEE ATTACHED
MAP		
XII. NATURE OF BUSINESS (provide a brief description)		
SOLAR FILM MANUFACTURING		
1		
XIII. CERTIFICATION (see instructions)		
I certify under penalty of law that I have personally examined and an	n familiar with the information subi	mitted in this application and all attachments and that, based on
my inquiry of those persons immediately responsible for obtaining t	the information contained in the a	application, I believe that the information is true, accurate, and
complete. I am aware that there are significant penalties for submitting	g talse information, including the p	possibility of fine and imprisonment.
A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATI	URE C. DATE SIGNED
1	Pat Calden	11/20/00-
PAT CALDARERA, PLANT MANAGER	Iwi Caldem	11/30/2015
COMMENTS FOR OFFICIAL USE ONLY		
С		
C		



EPA I.D. Number (copy from Item 1 of Form 1)

Form Approved. OMB No. 2040-0086. Approval expires 8-31-98.

Please print or type in the unshaded areas only.

VA0072354 United States Environmental Protection Agency

Form **NPDES** 



Washington, DC 20460 Application for Permit To Discharge Stormwater

# **Discharges Associated with Industrial Activity**

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of nformation, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

#### I. Outfall Location For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water. D. Receiving Water A Outfall Number (name) B. Latitude C. Longitude **SMITH RIVER** 001 36 43 39 79 56 50 **UNNAMED TRIBUTARY TO SMITH RIVER** 08 35 79 57 003 36 43 3 UNNAMED TRIBUTARY TO SMITH RIVER 79 57 39 004 36 43 02 **SMITH RIVER** 43 45 79 57 005 36 **UNNAMED TRIBUTARY TO SMITH RIVER** 1 006 36 43 50 79 57 5 UNNAMED TRIBUTARY TO SMITH RIVER 79 57 43 38 007 36 **UNNAMED TRIBUTARY TO SMITH RIVER** 79 57 7 43 35 800 36

### II. Improvements

Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit mpliance schedule letters, stipulations, court orders, and grant or loan conditions.

Identification of Conditions,		Affected Outfalls			Final     Compliance Date		
Agreements, Etc.	number	source of discharge	3. Brief Description of Project	a. req.	b. pro		
NOT APPLICABLE							

You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

### III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each know past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

Continued from	the Front						
IV. Narrative	Description of Pollutant Sources				The fact of the second		
Α.	For each outfall, provide an estimate of the total surface area drained by the out	the area (include units) o	f impervious surfa	ces (including pa	ved areas and building roofs) drained to the		
	Area of Impervious Surface	Total Area Drained	(provide	Outfall	Area of Impervious Surface		ea Drained
Outfall Number	(provide units)	units)		Number	(provide units)		de units)
001	143,513 SQ.FT.	205,279 S	Q.FT.	006	88,747 SQ. FT,		9 SQ. FT,
003	362,947 SQ. FT.	1,041,926 S	Q. FT	007	39,411 SQ. FT.	45,808	SQ. FT.
004	55,743 SQ. FT.	105,768 S	Q. FT.	800	0 SQ. FT.	710 \$	SQ. FT.
005	321,340 SQ.FT	438,288 SC	2. FT.		to the state of the second in a min	oper to allo	w ovposure to
	storm water: method of treatment, stora	ge or disposal; past and	present materials	management pro	ave been treated, stored or disposed in a ma actices employed, in the last three years, to id frequency in which pesticides, herbicides,	minimize cor	ntact by these
C.	For each outfall, provide the location an	nd a description of existing	SEE ATTACI	onstructural conf	rol measures to reduce pollutants in storm o trol and treatment measures and the ultima	water runoff; te disposal (	and a description
	wastes other than by discharge.	es, including the schedul	e and type of mail	iteriarice for corr	and and addition moderate and an arms		List Codes from
Outfall Number			Treatment				Table 2F-1
Number		S	SEE ATTACH				
V. Nonstorm	water Discharges			366	والمراجعات والتكوي		
A.	I certify under penalty of law that the	outfall(s) covered by the	is application have	e been tested o	r evaluated for the presence of nonstorm	vater discha	arges, and that all
	nonstormwater discharges from these of	1000	either an accomp	anying Form 2C	Signature	T n	ate Signed
PA	Name and Official Title (type or pri	ANAGER	Pat	Cald	am	1	7/2016
В.	Provide a description of the method use	ed, the date of any testin	g, and the onsite d	rainage points th	at were directly observed during a test		
SCHEMA	ATICS WERE REVIEWED A	AND MAINTENA	NCE PERSO	NNEL WEF ERMITTED	NSULTING, INC STAFF. IN A RE INTERVIEWED TO VERIFY COOLING WATER) AND 006	NO NO	N-STORM
VI Significan	nt Leaks or Spills		计算编 二				
Provide existing	niformation regarding the history of sig k, and the type and amount of material		toxic or hazardous	pollutants at the	e facility in the last three years, including the	approximate	e date and location
o, trio opini or to	and the type and different of material						

On January 11, 2013 at 1:15pm there was a spill of approximately 5 gallons of Emulsified Oil Substrate (EOS) through Outfall 006 to an unnamed tributary of the Smith River. The facility responded by placing booms in the stream. The standing water/EOS mixture was pumped out and transported to the treatment plant onsite. Both the National Response Center and the Virginia Department of Environmental Quality were notified about the spill.

### VA0072354

### **ATTACHMENT TO FORM 2F**

CPFilms, Incorporated Fieldale, Virginia

### IV.B. Narrative Description of Pollutant Sources

### Outfall 001 (Plant 1)

• This drainage basin is almost exclusively runoff from a paved parking lot.

### Outfall 003 (Plant 2)

- The storm and roof drains located around the facility discharge to this Outfall.
- Raw materials are either stored and handled under a roof or inside the building.
- One tank farm is exposed to stormwater, but this area is diked with a three-foot concrete retaining wall and bermed with earthen material as a secondary containment. This area also has a liner in place for tertiary containment.
- One diked 3,500 gallon emergency dump tank can store Therminol® 55.
- The lagoon is sloped to catch stormwater before it can reach the Outfall.
- All solid domestic waste is kept in dumpsters and is removed three times a week by a refuse company.

### Outfall 004 (Plant 2)

- The drainage area for this Outfall:
  - Does not contain and industrial processes
  - Includes the front parking lot to the plant and the guard house, and the grassy areas between the parking lot and the guard house

### Outfall 005 (Plant 1)

- The storm and roof drains located around the facility, in the landscaping and parking areas, discharge to this Outfall.
- Fertilizers and lime may be applied to the facility grounds and the herbicide, "Domade" or equivalent is used on an as needed basis for weed control in asphalt and concrete areas.
- All chemicals used for processing are stored inside the main building.
- Stormwater comes into contact with the sludge beds at the WWTP but does not run onto the property

### Outfall 006 (Plant 2)

- This Outfall is not monitored because:
  - Discharge to this Outfall does not come into contact with industrial process.
  - The topography includes a grassy field that receives no fertilizers or herbicides.

#### Outfall 007 (Plant 1)

• This drainage basin is almost exclusively runoff from a paved parking lot.

### Outfall 008 (Plant 1)

Drainage around WWTP Pump Station.

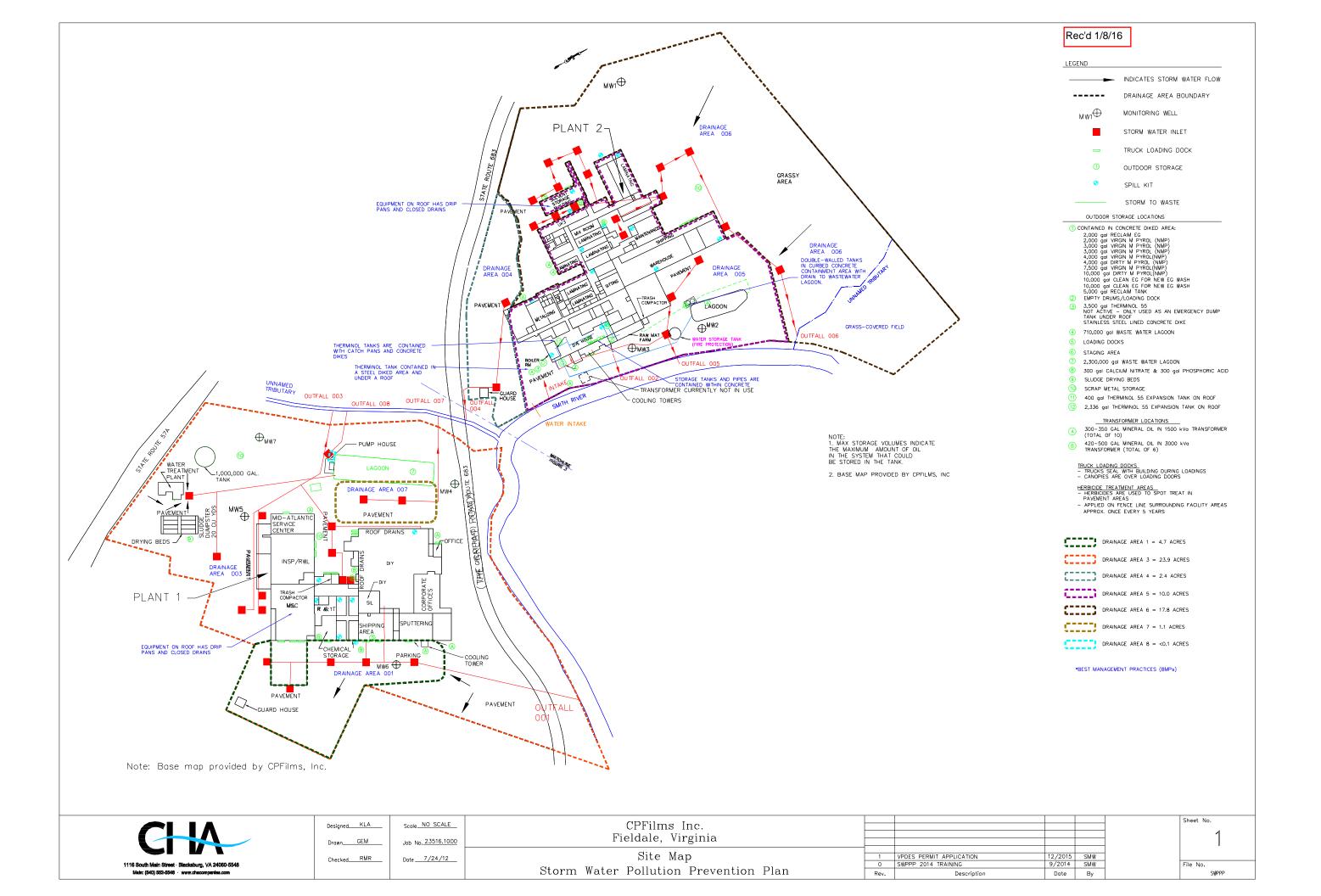
### IV.C. Structural Control Measures

#### Plant 1

Potential pollutants are reduced by vegetative ground cover. Areas around the WWTP are bermed such that runoff is diverted to the WWTP and not the stormwater outfall. Storm and roof drains are located around the facility and discharge to 003.

### Plant 2

Potential pollutants are reduced by vegetative ground cover and natural topography. Stormwater runoff is diverted to the respective outfalls using berms and concrete curbing. The tank farm area has tertiary containment.



### Continued from Page 2

### VA0072354

VII. Discharge Information			
A, B, C, & D: See instructions before proceeding. Co Tables VII-A, VII-B, and VII-C are included	led on separate sheets numbered VII-1	and VII-2.	
E. Potential discharges not covered by analysis or manufacture as an intermediate or final p	s-is any pollutant listed in Table 2F-2 a s roduct or byproduct?		l l
Yes (list all such pollutants below)		X No (9	go to section VIII)
Will Biological Toxicity Testing Data			
VIII. Biological Toxicity Testing Data  Do you have any knowledge or reason to believe that	at any biological test for acute or chronic	toxicity has been made on any	of your discharges or on a receiving
water in relation to your discharge within the last 3 ye  Yes (list results below)	ars?	X No (	go to Section IX)
Too (not results 25.5.1)			
		_	
IX. Contract Analysis Information		_	
Were any of the analyses reported in Item V perform	ed by a contract laboratory or consulting one number of, and pollutants analyzed by	and and	(
X   res (list the hame, address, and telephic laboratory or firm below)	,		(go to Section X)
A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
TEST AMERICA	5102 LAROCHE AVENUE SAVANNAH, GA 31404	919-354-7858	ALL EXCEPT PH AND THOSE LISTED BELOW
REIC, Inc.	225 INDUSTRIAL PARK ROAD BEAVER, WV 25813	304-255-2500	BOD FOR GRAB SAMPLES FOR OUTFALLS 005 AND 007
X. Certification			
I certify under penalty of law that this document and assure that qualified personnel properly gather and or those persons directly responsible for gathering complete. I am aware that there are significant p violations.	evaluate the information submitted. Bathe information, the information submit	sed on my inquiry of the person ted is, to the best of my knowle	or persons who manage the system edge and belief, true, accurate, and
A. Name & Official Title (type or print)		B. Area	Code and Phone No.
PAT CALDARERA, PLANT MANAGER			276-627-3000
C. Signature		D. Date	
Pat Calden			1/30/2015

EPA ID Number (copy from Item 1 of Form 1)

### VA0072354

Form Approved. OMB No. 2040-0086. Approval expires 8-31-98.

### VII. Discharge Information (Continued form page 3 of Form 2F)

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for Part Aadditional details. OUTFALL 001

Pollutant	Maximun (include		Average (include	Values e units)	Number of	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Storm Events Sampled	Sources of Pollutants
Oil and Grease	<4.7 mg/L	N/A	<4.7 mg/L	N/A	2	DATA FROM OUTFALL 007
Biological Oxygen Demand (BOD5)	5 mg/L	4.3 mg/L	5 mg/L	4.3 mg/L	2	
Chemical Oxygen Demand (COD)	* 1 26 may 1 19 may		26 mg/L	19 mg/L	2	
Total Suspended Solids (TSS)	17 mg/L	17 mg/L 27 mg/L		27 mg/L	2	
Total Kjeldahl Nitrogen	1.1 mg/L	0.84 mg/L	1.1 mg/L	0.84 mg/L	2	
Nitrate plus Nitrite Nitrogen	0.38 mg/L	0.4 mg/L	0.38 mg/L	0.4 mg/L	2	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	2	
рН	Minimum 6.41 S.U.	Maximum 6.97 S.U.	Minimum 6.41 S.U.	Maximum 6.97 S.U.	2	

The first sample consisted of the composite and the second consisted of grab samples.

List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and Part B-

requirem	ents.					
Pollutant	Maximum (include	values units)	Average (include	Values units)	Number	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
NONE						
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					1	Continue on Reverse

Continued	£	46.0	Frant
L.Ontinued	mom	Ine	Front

Part C- List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements.												
Co	omplete or	ne table t	for each outfall.			OUTFAL			<del>,                                    </del>			
Pollutant			Maximum (include			A	verage (include	Values units)	Number of			
and CAS Numbe (if available)		Tal	ab Sample ken During First 30 Minutes		w-weighted Composite	Grab Sample Taken During First 30 Minutes		Flow-weighted Composite	Storm Events Sampled		Sources of Pollu	tants
NONE					Zomposite			Composito	†			
HONE												
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				L		<u></u>		<u> </u>				
Part D- Pr		a for the		hich res			flow we	eighted composite sampl 5.	e. 6.		1	8.
1. Date of Storm Event	2. Duration of Stor (in minus	m	3. Total rainfa during storm e (in inches)	event	Number of ho beginning of ured and en	4.  ours between f storm meas- id of previous e rain event	d	aximum flow rate during rain event ons/minute or specify units)	Total flow f rain ever (gallons of specify un	nt or	7. Season sample was taken	Form of Precipitation (rainfall, snowmelt)
7/28/2015	150	)	2.1 in.		>72	2 hrs	~3,	700 GAL/MIN	~258,0 GALLO		Summer	rainfall
9. Provide a desc	crintian of	the meth	nod of flow measi	rement	or estimate			<b>_</b>				

The height of the water in the discharge pipe was measured and used to calculate flow based on Manning's Equation. Flow was calculated between the time the grab sample was collected and the time the last composite subsample was collected which was when flow ceased. The flow rate was measured each time a sample was collected, and the volume of sample collected was based on the flow.

Form Approved.

OMB No. 2040-0086.

Approval expires 8-31-98.

#### THE HAMBON (DOP) WOM NOM TON ON

### VA0072354

### VII. Discharge Information (Continued form page 3 of Form 2F)

Part A- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details. OUTFALL 003:

Pollutant	Maximur (includ	n Values e <i>units</i> )		e Values e units)	Number of	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Storm Events Sampled	Sources of Pollutants
Oil and Grease	<5.0 mg/L	N/A	<5.0 mg/L	N/A	2	DATA FROM OUTFALL 005
Biological Oxygen Demand (BOD5)	3 mg/L	23 mg/L	3 mg/L	23 mg/L	2	
Chemical Oxygen Demand (COD)	18 mg/L	18 mg/L 46 mg/L		46 mg/L	2	
Total Suspended Solids (TSS)	7.2 mg/L	7.2 mg/L 4.9 mg/L		7.2 mg/L 4.9 mg/L		
Total Kjeldahl Nitrogen	0.95 mg/L	2.2 mg/L	0.95 mg/L	2.2 mg/L	2	
Nitrate plus Nitrite Nitrogen	0.30 mg/L	0.34 mg/L	0.30 mg/L	0.34 mg/L	2	
Total Phosphorus	<0.10 mg/L <0.10 mg/L		<0.10 mg/L	<0.10 mg/L <0.10 mg/L		
pH	Minimum 6.01 S.U.	Maximum 7.08 S.U.	Minimum 6.01 S.U.	Maximum 7.08 S.U.		

### \*The first sample consisted of the composite and the second consisted of grab samples.

List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant	Maximum (include		Average (includ	Values e units)	Number	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
NONE						
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				:F-2, 2F-		you know or have OUTFALL 0		to believe is present.	See the instruc	tions for a	idditional details a	nd requirements.
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Pollutan	ıt İ		(include				(include		Number of			
and	Ī		rab Sample			Grab Sample			Storm			
CAS Numt (if availab			ken During			Taken During	g	Flancons's fet	Events	ļ		
(ıı avallab.	,		First 30 Minutes		w-weighted Composite	First 30 Minutes	İ	Flow-weighted Composite	Sampled		Sources of Police	ıtants
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Part D-	Provide dat	ta for the	storm event(s) w	hich res	ulted in the maxin	num values for the	flow we	eighted composite samp	ole.			
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1. Date of Storm	Duration		Total rainfa	all	14umber of 18	ours between f storm meas-	d	luring rain event	rain eve	nt	Season sample was	Precipitation
Event	of Stor (in minu		during storm e (in inches)		ured and en	d of previous		ns/minute or specify	(gallons		taken	(rainfall, snowmelt)
	,				measurable	e rain event	<del> </del>	units)	specify un	.noj		anowineit)
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7/20/2045	150	,	2.1 in.		<b>-7</b> 2	? hrs	ء_ ا	i,800 gal/min	~345,0		Summer	rainfall
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0 D1	L	the	hod of flow meas	Iroma-'	or estimate		<u> </u>				1	<del></del>
<ol><li>Provide a de</li></ol>	escription of	ine met	TIOD OF HOW MEAS	rement	oi estimate							

The height of the water in the discharge pipe was measured and used to calculate flow based on Manning's Equation.

Flow was calculated between the time the grab sample was collected and the time the last composite subsample was collected which was when flow ceased. The flow rate was measured each time a sample was collected, and the volume of sample collected was based on the flow.

Form Approved. OMB No. 2040-0086. Approval expires 8-31-98.

### VA0072354

VII. Disc	harge Information	on (Continued form page 3 of Form 2F	)		
Part A-	You must provide additional details.	the results of at least one analysis for ever	y pollutant in this table.	Complete one table for each outfall.	See instructions for

Pollutant	Maximum (include	1	Average (include		Number of	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Storm Events * Sampled	Sources of Pollutants
Oil and Grease	<4.7 mg/L	N/A	<4.7 mg/L	N/A	2	DATA FROM OUTFALL 007
Biological Oxygen Demand (BOD5)	5 mg/L	4.3 mg/L	5 mg/L	5 mg/L 4.3 mg/L		
Chemical Oxygen Demand (COD)	26 mg/L	19 mg/L	26 mg/L	19 mg/L	2	
Total Suspended Solids (TSS)	17 mg/L	27 mg/L	17 mg/L	27 mg/L	2	
Total Kjeldahl Nitrogen	1.1 mg/L	0.84 mg/L	1.1 mg/L	0.84 mg/L	2	
Nitrate plus Nitrite Nitrogen	0.38 mg/L	0.4 mg/L	0.38 mg/L	0.4 mg/L	2	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L <0.10 mg/L		<0.10 mg/L	2	
pН	Minimum 6.41 S.U.	Maximum 6.97 S.U.	Minimum 6.41 S.U.	Maximum 6.97 S.U.	2	

The first sample consisted of the composite and the second consisted of grab samples.

List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and Part Brequirements.

Pollutant	Maximum (include		Average (include	Values e units)	Number	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
NONE						
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Part C-			nown in Tables 2 or each outfall.	2F-2, 2F	-3, and 2F-4 that	you know or have		to believe is present. S	See the instruc	tions for a	additional details a	nd requirements
	·····		Maximun		5		Average	Values	Number			
Pollutar and CAS Num (if availat	ber	Tak	(include to Sample ten During First 30 Minutes	FI	ow-weighted Composite	Grab Samp Taken Durir First 30 Minutes		Flow-weighted Composite	of Storm Events Sampled		Sources of Poll	utants
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Part D-	Provide dat	a for the	storm event(s) w	hich res	sulted in the maxim	um values for the	flow we	I eighted composite samp		L		
	2.		3.		4	l.		5.	6.		7.	8.
1. Date of Storm Event	Durati of Stor (in minu	m	Total rainfa during storm e (in inches)	vent	Number of ho beginning of ured and end measurable	storm meas-	d	aximum flow rate uring rain event ns/minute or specify units)	Total flow f rain eve (gallons of specify un	nt or	Season sample was taken	Form of Precipitation (rainfall, snowmelt)
7/28/2015	150	)	2.1 in.		>72		~3,	700 GAL/MIN	~258,0 GALLO	00	Summer	rainfall
9. Provide a de	scription of	the metho	od of flow measu	rement	or estimate							

The height of the water in the discharge pipe was measured and used to calculate flow based on Manning's Equation. Flow was calculated between the time the grab sample was collected and the time the last composite subsample was collected which was when flow ceased. The flow rate was measured each time a sample was collected, and the volume of sample collected was based on the flow.

Form Approved.

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Approval expires 8-31-98.

## VA0072354

VII. Discharge Information (Continued form page 3 of Form 2F)

Part A-Part A-Out must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details. OUTFALL 005:

Pollutant	Maximur (include			e Values le units)	Number of	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Storm Events * Sampled	Sources of Pollutants
Oil and Grease	<5.0 mg/L	N/A	<5.0 mg/L	N/A	2	
Biological Oxygen Demand (BOD5)	3 mg/L	23 mg/L	3 mg/L	23 mg/L	2	
Chemical Oxygen Demand (COD)	18 mg/L	18 mg/L 46 mg/L		46 mg/L	2	-
Total Suspended Solids (TSS)	7.2 mg/L	7.2 mg/L 4.9 mg/L		4.9 mg/L	2	
Total Kjeldahl Nitrogen	0.95 mg/L	2.2 mg/L	0.95 mg/L	2.2 mg/L	2	
Nitrate plus Nitrite Nitrogen	0.30 mg/L	0.34 mg/L	0.30 mg/L	0.34 mg/L	2	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	2	
рН	Minimum 6.01 S.U.	Maximum 7.08 S.U.	Minimum 6.01 S.U.	Maximum 7.08 S.U.		

\*The first sample consisted of the composite and the second consisted of grab samples.

List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant	Maximum (include		Average (includ	Values e units)	Number	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
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Part C-	List each po	ollutant s	shown in Tables 2	F-2, 2F-			reason	to believe is present. S	ee the instruc	tions for a	idditional details ar	nd requirements.
	Complete o	ne table	for each outfall.		OUTF	ALL 005						
	.		Maximum				verage (include	Values	Number			
Pollutar and	nt	- C	(include	unitsj		Grab Sample		, umaj	of Storm			
CAS Num			ken During			Taken Durin			Events			
(if availab	le)		First 30		w-weighted	First 30		Flow-weighted	Sampled		O	
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Part D-		ta for the		nich res		num values for the 4.	TIOW WE	eighted composite sampl	e. 6.			8.
1,	2. Durati	<u></u>	<ol> <li>Total rainfa</li> </ol>	11	Number of h	ours between		aximum flow rate	Total flow		7. Season	Form of
Date of Storm	of Stor		during storm e			storm meas- d of previous		during rain event ans/minute or specify	rain eve (gallons		sample was	Precipitation (rainfall,
Event	(in minu	tes)	(in inches)			e rain event	(gano	units)	specify un		taken	snowmelt)
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7/28/2015	150	)	2.1 in.		>72	hrs	~6	,800 gal/min	gallor		Summer	rainfall
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			nod of flow measu				<u>.                                    </u>				<del></del>	4.
The height	of the v	vater i	in the disch	arge	pine was me	easured and	luse	d to calculate flo	ow based	on Ma	nnina's Eau	ation.

The height of the water in the discharge pipe was measured and used to calculate flow based on Manning's Equation.

Flow was calculated between the time the grab sample was collected and the time the last composite subsample was collected which was when flow ceased. The flow rate was measured each time a sample was collected, and the volume of

sample collected was based on the flow.

EPA ID Number (copy from Item 1 of Form 1)

Form Approved. OMB No. 2040-0086. Approval expires 8-31-98.

### VA0072354

### VII. Discharge Information (Continued form page 3 of Form 2F)

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for Part A-**OUTFALL 006: WILL NOT BE SAMPLED - NO INDUSTRIAL ACTIVITY** additional details.

Pollutant	Maximun (include			e Values le units)	Number	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
Oil and Grease	*	*	*	*	*	*NOT SAMPLED-NO INDUSTRIAL ACTIVITY
Biological Oxygen Demand (BOD5)	*	*	*	*	*	
Chemical Oxygen Demand (COD)	*	*	*	*	*	
Total Suspended Solids (TSS)	*	* *		*	*	
Total Kjeldahl Nitrogen	*	*	*	*	*	
Nitrate plus Nitrite Nitrogen	*	*	*	*	*	
Total Phosphorus	*	*	*	*	*	
pН		***************************************	Minimum Maximum			in the facility's NDDES parmit for its process

List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and

requirem	requirements.  Maximum Values Average Values											
Pollutant	Maximum (include	1 Values	(include	values	Number							
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants						
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			shown in Tables 2 e for each outfall.	2F-2, 2F		OUTFALL 0		to believe is present.	See the instruct	dons for a	additional details a	ina requirements.
Pollut	ant		Maximum (include				verage (include	values units)	Number			
and	<b>;</b>		rab Sample	, a,		Grab Sampl	е		of Storm			
CAS Nu (if availa		Ta	aken During First 30	Flo	ow-weighted	Taken Durin First 30	g	Flow-weighted	Events Sampled			
			Minutes		Composite	Minutes		Composite	Campica		Sources of Poll	utants
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Part D-	Provide da	a for the	e storm event(s) w	hich re	sulted in the maxir	num values for the	flow w	I eighted composite sar	nple.	L	<u> =</u>	
	2.	I 101 (1)	3.	THOIT IC.	-	4.		5.	6.	F	7.	8. Form of
1. Date of	Durati of Sto		Total rainfa			ours between storm meas-	M	aximum flow rate luring rain event	Total flow rain eve	nt	Season sample was	Precipitation
Storm Event	(in minu		during storm e (in inches)			d of previous e rain event	(gallo	ns/minute or specify units)	(gallons specify un		taken	(rainfall, snowmelt)
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N/A	N/A	•	N/A		"	iiA		N/A	1972			N/A
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9. Provide	a description	of the	method of flow me	easurem	nent or estimate							
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					*NOT	SAMPLED-NO INI	JUBIK	INC MOTIVITY				

Form Approved.

OMB No. 2040-0086.

Approval expires 8-31-98.

### VA0072354

### VII. Discharge Information (Continued form page 3 of Form 2F)

Part A- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details. OUTFALL 007

Pollutant	Maximum (include			e Values le units)	Number	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events * Sampled	Sources of Pollutants
Oil and Grease	<4.7 mg/L	N/A	<4.7 mg/L	N/A	2	
Biological Oxygen Demand (BOD5)	5 mg/L	4.3 mg/L	5 mg/L	4.3 mg/L	2	
Chemical Oxygen Demand (COD)	26 mg/L	19 mg/L	26 mg/L	19 mg/L	2	
Total Suspended Solids (TSS)	17 mg/L	27 mg/L	17 mg/L	27 mg/L	2	
Total Kjeldahl Nitrogen	1.1 mg/L	0.84 mg/L	1.1 mg/L	0.84 mg/L	2	
Nitrate plus Nitrite Nitrogen	0.38 mg/L	0.4 mg/L	0.38 mg/L	0.4 mg/L	2	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	2	
pН	Minimum 6.41 S.U.	Maximum 6.97 S.U.	Minimum 6.41 S.U.	Maximum 6.97 S.U.	2	

### \*The first sample consisted of the composite and the second consisted of grab samples.

List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant	Maximum (include		Average (include	Values units)	Number		
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample During 30 M		Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
NONE							
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Part C- L	ist each po	llutant s	hown in Tables 2	F-2, 2F-	3, and 2F-4 that y	ou know or have r	eason	to believe is present. S	ee the instruct	ons for a	dditional details ar	d requirements.
			for each outfall.		Ol	JTFALL 007			,			
Pollutan			Maximum (include				verage 'include	Values units)	Number of			
and			ab Sample			Grab Sample			Storm			
CAS Num			ken During			Taken During	'	Channel of the of	Events			
(if availab	ne)		First 30 Minutes		w-weighted	First 30 Minutes		Flow-weighted Composite	Sampled		Sources of Pollu	tants
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Part D-	Provide dat	ta for the	storm event(s) w	hich res	ulted in the maxir	num values for the	flow we	eighted composite samp	le.			
<u> </u>	2.		3.			4.		5.	6.		7.	8.
1.	Durati	ion	Total rainfa	ali		ours between storm meas-		laximum flow rate luring rain event	Total flow train eve		Season	Form of Precipitation
Date of Storm Event	of Stor	rm	during storm e	vent		d of previous		ons/minute or specify	(gallons	or	sample was taken	(rainfall,
	(in minu	ites)	(in inches,			e rain event		units)	specify un	its)	takon	snowmelt)
									~258,0	00		
7/28/2015	150	o	2.1 in.		>72	hrs	~3,	700 GAL/MIN	GALLO		Summer	rainfall
]									~~~~~			
							<u> </u>					<u> </u>
9. Provide a d	escription o	of the me	thod of flow mea	suremen	t or estimate							

The height of the water in the discharge pipe was measured and used to calculate flow based on Manning's Equation. Flow was calculated between the time the grab sample was collected and the time the last composite subsample was collected which was when flow ceased. The flow rate was measured each time a sample was collected, and the volume of sample collected was based on the flow.

### EPA ID Number (copy from Item 1 of Form 1)

VA0072354

Form Approved.

OMB No. 2040-0086.

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### VII. Discharge Information (Continued form page 3 of Form 2F)

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details. OUTFALL 008

Pollutant	Maximun (include		•	e Values e units)	Number of	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Storm Events Sampled	Sources of Pollutants
Oil and Grease	<4.7 mg/L	N/A	<4.7 mg/L	N/A	2	DATA FROM OUTFALL 007
Biological Oxygen Demand (BOD5)	5 mg/L	4.3 mg/L	5 mg/L	4.3 mg/L	2	
Chemical Oxygen Demand (COD)	26 mg/L	19 mg/L	26 mg/L	19 mg/L	2	
Total Suspended Solids (TSS)	17 mg/L	27 mg/L	17 mg/L	27 mg/L	2	3333
Total Kjeldahl Nitrogen	1.1 mg/L	0.84 mg/L	1.1 mg/L	0.84 mg/L	2	
Nitrate plus Nitrite Nitrogen	0.38 mg/L	0.4 mg/L	0.38 mg/L	0.4 mg/L	2	
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	<0.10 mg/L	2	
pН	Minimum 6.41 S.U.	Maximum 6.97 S.U.	Minimum 6.41 S.U.	Maximum 6.97 S.U.	2	

### \*The first sample consisted of the composite and the second consisted of grab samples.

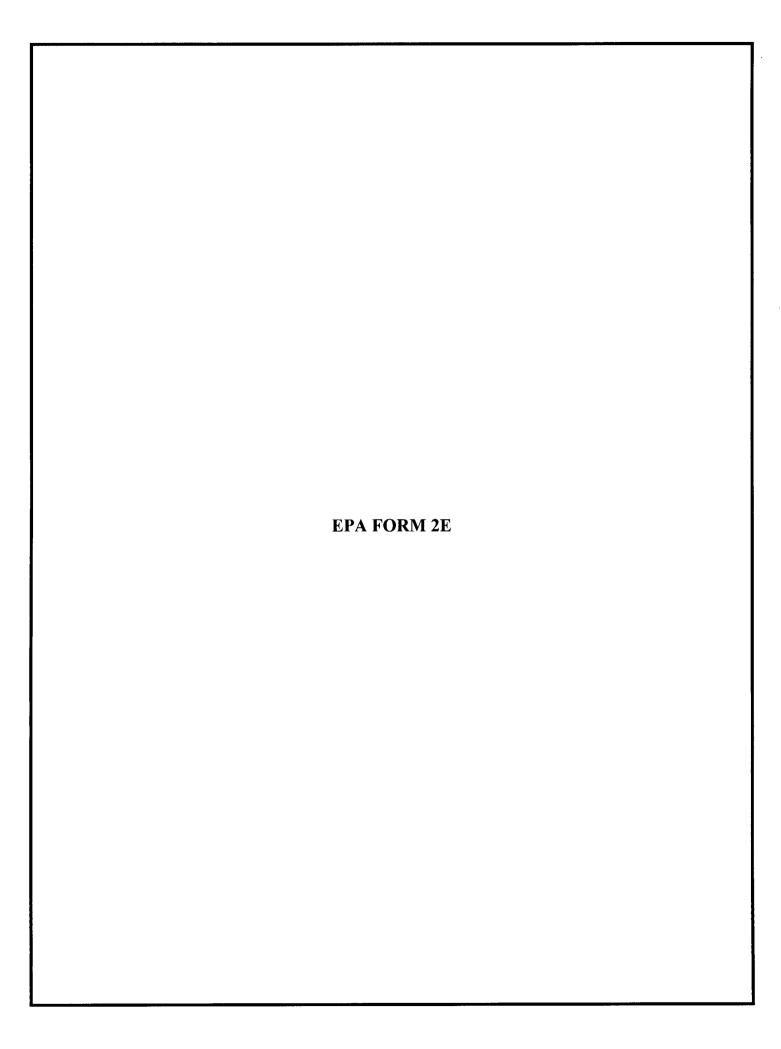
List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process

Part B- wastewater (if the facility is operating under and existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

requirem	nents.					
	Maximum		Average	Values		
Pollutant	(include	units)	(include	units)	Number	
and CAS Number (if available)	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	of Storm Events Sampled	Sources of Pollutants
NONE						
110112					<u> </u>	
-						
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				<u> </u>	_	
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		-				
	<b>+</b>				<u> </u>	
			<del>                                     </del>		<del> </del>	
					<del> </del>	
			ļ. <u> </u>		ļ	
		<u> </u>			<del></del>	<u> </u>

	ist each po			F-2, 2F-	3, and 2F-4 that y	you know or have o	reason	to believe is present. S	See the instruct	ions for a	dditional details ar	nd requirements.
(	Complete or	ne table	for each outfall.	)/=l :				Values	1 -			
Pollutani	,		Maximum (include				verage (include	Values units)	Number			
and	<u> </u>	Gr	ab Sample			Grab Sample			of Storm			
CAS Numb (if availabl			ken During			Taken During First 30	•	en communi	Events			
(II availabl	e)		First 30 Minutes		w-weighted Composite	Minutes		Flow-weighted Composite	Sampled		Sources of Pollu	tants
NONE	*				,composite							
HOME				-								
					-							
· · · · · ·												·
***							_		<u> </u>			
							_	-	-			
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							_			<b>-</b>		
Part D-	Provide da	ta for the	storm event(s) w	hich res	ulted in the maxin	num values for the	flow we	eighted composite samp	le.			
	2.	1	3.			4. ours between		5. aximum flow rate	6. Total flow	from	7.	8. Form of
1. Date of Storm	Durati	ion	Total rainfa			storm meas-	d	luring rain event	rain eve	nt	Season sample was	Precipitation
Event	of Sto		during storm e (in inches)			d of previous e rain event	(gallo	ns/minute or specify units)	(gallons specify un		taken	(rainfall, snowmelt)
	. <u>-</u>		<u> </u>		measurable	o rain ovoire				-/		
]												
								Í	~258,0	00		
7/28/2015	150	0	2.1 in.		>72	hrs hrs	~3,	700 GAL/MIN	GALLO		Summer	rainfall
									UALLU			
							L					
	scription of	the meth	nod of flow measu	rement	or estimate		Luss	d to calculate fl	ow based	on Ma	nning's Egy	ation

The height of the water in the discharge pipe was measured and used to calculate flow based on Manning's Equation. Flow was calculated between the time the grab sample was collected and the time the last composite subsample was collected which was when flow ceased. The flow rate was measured each time a sample was collected, and the volume of sample collected was based on the flow.



												Revise	d Pag	e Rec	'd 1/8/16
Please print or	r type in tl	he unst	naded ar	eas only.		EPA ID N	lumber (d	opy from l	tem 1 of Form 1	)		ved. OMB No. pires 5-31-92.	2040-0	086.	
FORM 2E NPDES	<b>≎</b> EF	PA	Fa	ciliti	es V	Vhic	h Do	o No	t Disch	arge	Proces	s Was	tew	ateı	r
I. RECEIVING	WATE	RS		1							H	F 1 - F			46.34
		Fo	or this	outfall,	, list th	e latitu	de and	d longitu	ude, and na	me of t	he receiving	water(s).			
Outfall		L	_atitude		L	ongitud	е	Receivir	ng Water (nan	ne)					
Number (lis		Deg	Min	Sec	Deg	Min	Sec	Smith	n River						
001	3	6.00	43.00	39.00	79.00	56.00	50.00								
II. DISCHARG	E DATE	(If a i	new dis	charger,	the dat	e you ex	pect to	begin dis	charging)						
III.TYPE OF W	VASTE			iz gli		u XII	(1) H	#J.5	1 - 200			48.5		JI N	MAL.
A. Check the	box(es) i	indicat	ting the	general	type(s)	of waste	es disch	arged.							
☐ Sanitary	Wastes		□ Re	staurani	or Cafe	eteria W	astes		☑ Nonconta	act Coolir	ng Water	Other N Wastew			Stormwate
authorit	g Source by (see in	es —	Provide ions). Provide	measu e estima	tes for th	ne parar	neters li	sted in th	e left-hand co	lumn belo	n below, unless ow, unless waiv ues (see instru	ed by the pe			
5.11					Max	(1) ximum				(2) erage Dail		(3) Number	of (c	or)	(4)
	utant or ameter					y Value de units)				ie (last yei clude units		Measurem Taken	ents		e of Estimate v discharger)
				Mas	is	Co	ncentration	on	Mass		Concentration	(last yea			
Biochemical Oxy Demand (BOD)	ygen			Waiv	er	G	rante	d E							
Total Suspende				Waiv	er	G	rante	3							
Fecal Coliform ( or if sanitary was				N/	A										
Total Residual C chlorine is used		if		N/	Α										
Oil and Grease						<:	mg/I	*				1.00	)		
*Chemical oxyge	en demar	nd (COI	D)			<2	0 mg/	L*				1.00	)		
*Total organic ca	arbon (TC	OC)				3.	6 mg/:	L*				1.00	)		

\*If noncontact cooling water is discharged

Waiver

Value

Value

143.00

143.00

143.00

143.00

7.10 °c

17.50 °c

Ammonia (as N)

Discharge Flow

pH (give range)

Temperature (Winter)

Temperature (Summer)

5.90 °C

19.60 °C

Granted

0.732 MGD

6.83 - 7.62 S.U.

0.592 MGD

7.08-7.45

V. Except for leaks or spills, will the discharge described in this form be intermittent or seasonal?	
If yes, briefly describe the frequency of flow and duration.	□ No
Flow resulting from use of river water as non-contact cooling water during emerwhen mechanical cooling system is not available.	gency situations
VI. TREATMENT SYSTEM (Describe briefly any treatment system(s) used or to be used)	
N/A	
VII. OTHER INFORMATION (Optional)  Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other is	nformation you feel
should be considered in establishing permit limitations. Attach additional sheets, if necessary.	,
N/A	
VIII. CERTIFICATION	
I certify under penalty of law that this document and all attachments were prepared under my direction or superv	ision in accordance with a
system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on persons who manage the system, or those persons directly responsible for gathering the information, the information	submitted is to the best of
my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting	false information, including
the possibility of fine and imprisonment for knowing violations.	B. Phone No. (area code
A. Name & Official Title	& no.)
PAT CALDARERA, PLANT MANAGER	(276) 627-3000
C. Signature	D. Date Signed
Pat Caldam	11/30/2015

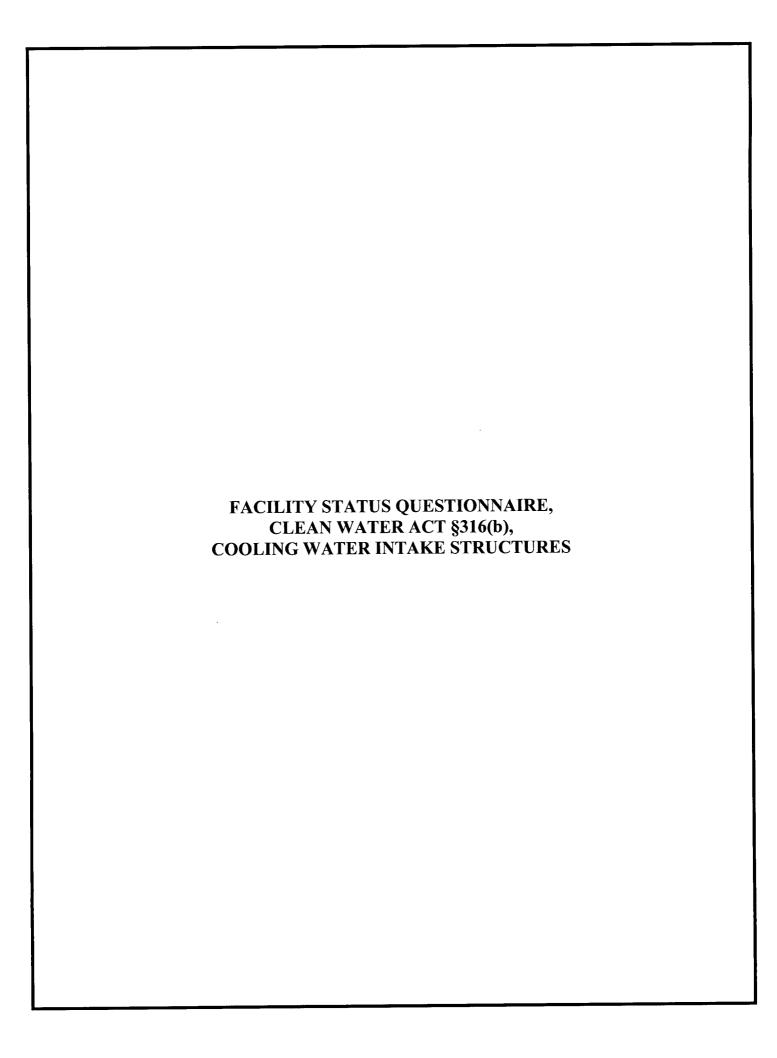
											Povis	od Bo	no Po	c'd 1/8/16
											Kevisi	su raį	ge ike	cu 1/6/10
Please print or	r type in the ur	shaded a	reas only.		EPA ID N	lumber (d	copy from	Item 1 of Form	1)	Form Appro	oved. OMB No xpires 5-31-92	. 2040-0	086.	
FORM 2E					Vhic	h Do	o No	t Disch	ar	ge Proces	s Was	tew	ate	r
I. RECEIVING	WATERS		đi.	100	Milk.				l.		10			
	F	or this	outfall	, list the	e latitu	de and	d longi	tude, and n	ame	e of the receiving	water(s).			
Outfall	1	Latitude	<del></del>	L	ongitud	e	Receiv	ing Water (nai	ne)					
Number (lis	Deg	Min	Sec	Deg	Min	Sec	Smit	h River						
002	36.0	(43.0)	44.00	79.00	57.00	2.00								
II. DISCHARG	E DATE (If a	new dis	L scharger,	the date	e you ex	pect to	begin di	ischarging)						
III.TYPE OF W	/ASTE		WE T	Water At	, Will			EL STATE	71	A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA				
A. Check the I	oox(es) indic	ating the	general	type(s)	of waste	es disch	arged.							
☐ Sanitary	Wastes	□ Re	estauran	t or Cafe	teria Wa	astes		☑ Noncon	tact (	Cooling Water	Other N Wastev			)
B. If any coolir	ng water add	itives are	used, I	ist them	here, Br	riefly de	scribe th	neir compositio	n if t	his information is ava	ailable.			
IV. EFFLUEN	CHARACT	ERISTIC	s	12000		. iile	946 W					Ī.	- 1	113
authorit B New Di	y (see instru schargers -	ctions). – Provid	e estima	tes for th	ne parar	neters li	isted in 1	the left-hand co	olum	column below, unless in below, unless waiv ed values (see instru	ed by the pe			
addioni	y. Instead of	THE HAIT	DC1 01 11		(1)	non, pro	//Ido alla		_	2)	(3)	1	or)	(4)
	utant or ameter			Max Daily	kimum y Value de units)			Va	lue (Î	ge Daily ast year) le units)	Number Measuren Taker	r of nents	Source	e of Estimate w discharger)
			Mas	ss	Co	ncentrati	on	Mass		Concentration	(last ye		(11.11)	w dicentarger/
Biochemical Oxy Demand (BOD)	/gen		Waiv	ver	G	rante	d							
Total Suspended	d Solids (TSS)		Waiv	/er	G	rante	d							
Focal Coliform (i	if haliavad nra	ent												

	(° Mayi	num	Aver	age Daily		or) (4)	
Pollutant or Parameter	Daily	Value e units)	Value	(last year) ide units)	Number of Measurements Taken	Source of Estimate (if new discharger)	
	Mass	Concentration	Mass	Concentration	(last year)	(ii iii iii ii ii ii ii ii ii ii ii ii i	
Biochemical Oxygen Demand (BOD)	Waiver	Granted					
Total Suspended Solids (TSS)	Waiver	Granted					
Fecal Coliform (if believed present or if sanitary waste is discharged)	N/A						
Total Residual Chlorine (if chlorine is used)	N/A						
Oil and Grease		<5.1 mg/L			1.00		
*Chemical oxygen demand (COD)		<10 mg/L			1.00		
*Total organic carbon (TOC)		2.4 mg/L			1.00		
Ammonia (as N)	Waiver	Granted					
Discharge Flow	Value 1.94	6 MGD	0.3	92 MGD	25.00		
pH (give range)	Value 7.80	S.U.	7.3	4 S.U.	25.00		
Temperature (Winter)	nperature (Winter)			9.50 ℃	25.00		
Temperature (Summer)		18.10°c		15.60 °C			

\*If noncontact cooling water is discharged

V. Except for leaks or spills, will the discharge described in this form be intermittent or seasonal?	
If yes, briefly describe the frequency of flow and duration.	□ No
Flow resulting from use of river water as non-contact cooling water during emerwhen mechanical cooling system is not available.	gency situations
·	
VIII TOTATHENT OVOTEN (Describe briefly any treatment system (a) used on to be used)	
VI. TREATMENT SYSTEM (Describe briefly any treatment system(s) used or to be used)	
N/A	
VII. OTHER INFORMATION (Optional)	nformation you fool
Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other i should be considered in establishing permit limitations. Attach additional sheets, if necessary.	mornation you leer
N/A	
N/A	
VIII. CERTIFICATION  I certify under penalty of law that this document and all attachments were prepared under my direction or superv	ision in accordance with a
system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on persons who manage the system, or those persons directly responsible for gathering the information, the information	my inquiry of the person or submitted is to the best of
my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting	false information, including
the possibility of fine and imprisonment for knowing violations.	D Dhone No. 10
A. Name & Official Title	B. Phone No. (area code & no.)
PAT CALDARERA, PLANT MANAGER	(276) 627-3000
C. Signature	D. Date Signed
Tat Caldan	11/30/2015

EPA Form 3510-2E (8-90)



## Virginia Department of Environmental Quality (DEQ)

Facility Status Questionnaire

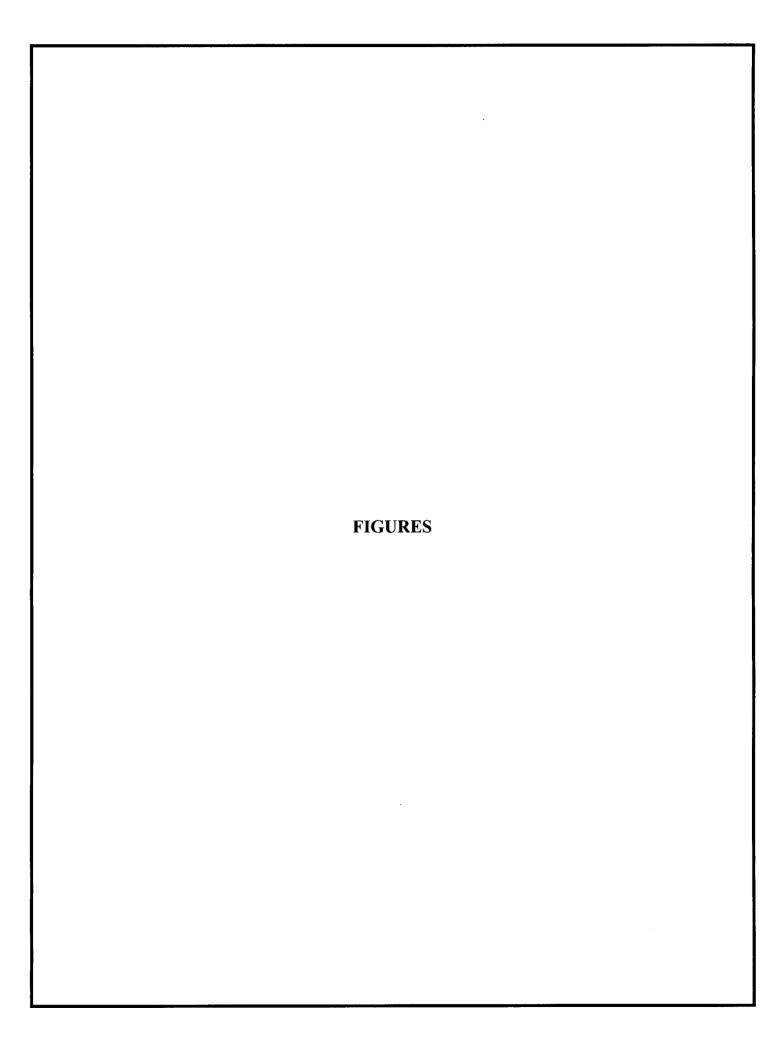
Clean Water Act §316(b)

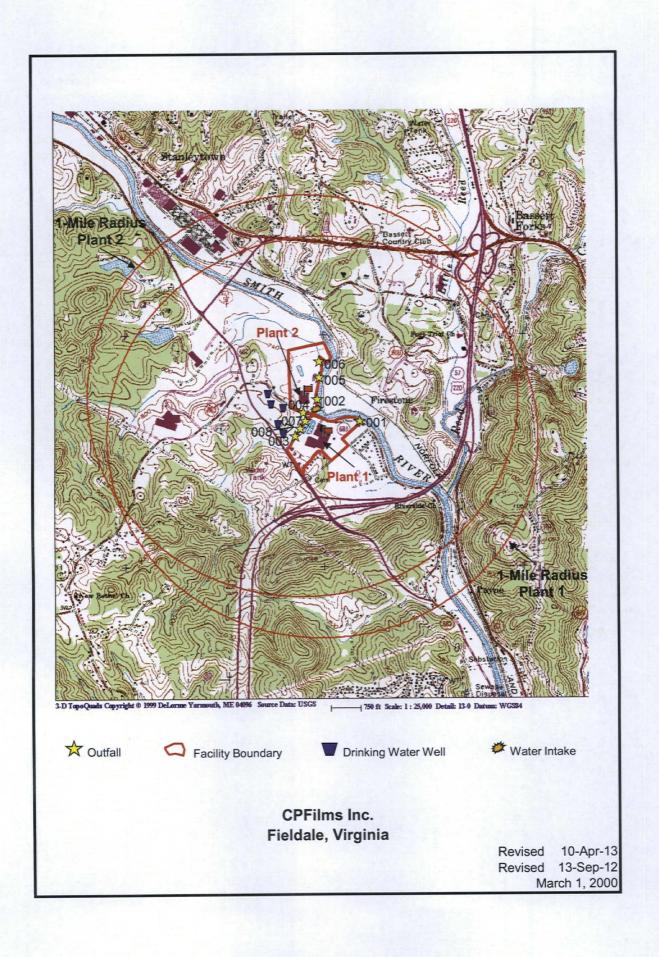
Cooling Water Intake Structures

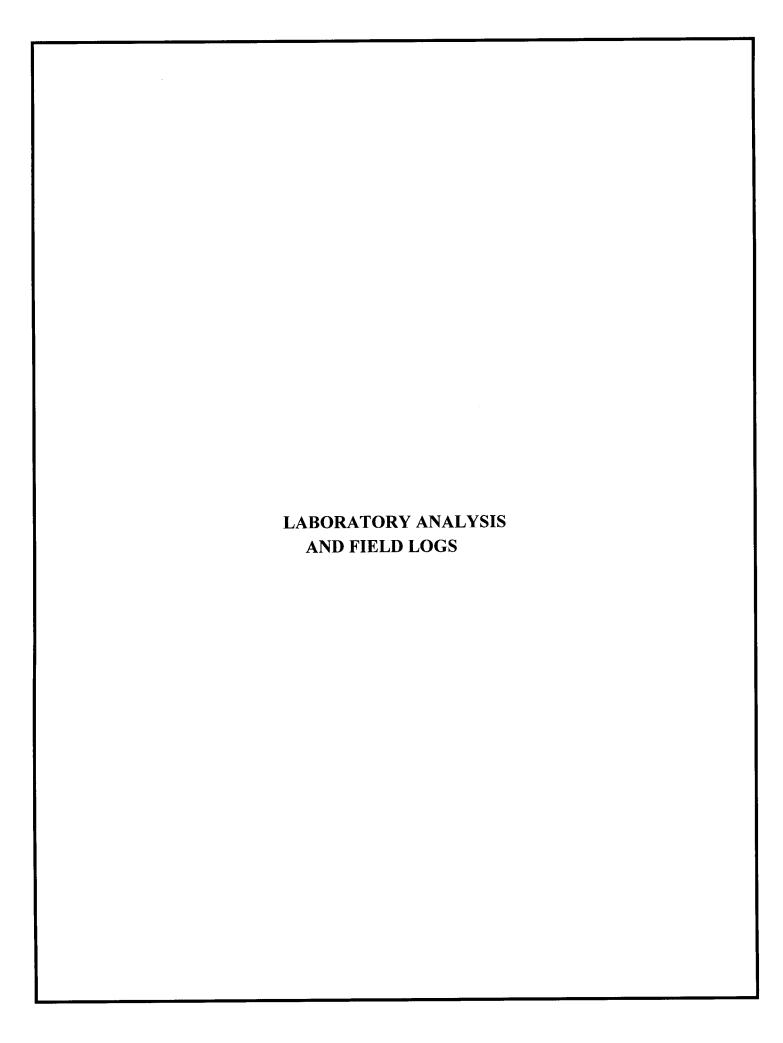
	ner/Permittee me of Facility:	Name: <u>CPFilms Inc</u>
		umber: VA0072354
1. <b>X</b>	Yes	lustrial process involve operation of a cooling system? (Continue to next question)
	No Don't know	(Stop, no further responses are necessary) (Continue)
2. <b>X</b>	Does the cool	ing system use water for cooling purposes? (Continue to next question)
() () ()	No Don't know	(Stop, no further responses are necessary) (Continue)
3.	located in a ri	any portion or all of the water used at your facility from one or more intake structures ver, stream, canal, lake, estuary or other surface water source that are operated either or
X	Yes Name of the v	vaterbody source(s): Smith River itude location: Lat: 36°43'40.4"N Long: 79°57'01.4"W
() ()	(Continue to r No Don't know	next question) (Stop, no further responses are necessary) (Continue)
4. <b>X</b> ∷		withdrawals from the intake structure reported annually to the DEQ under the "Water eporting" Regulation (9VAC 25-200)?
	Don't know	
5.	of withdrawing	sum the maximum amount of water that each intake structures is designed or capable g, would the total sum be greater than two million gallons of water per day (2 MGD)?
© <b>X</b> ☑	Yes No Don't know	
6.	water per day	three years, has your facility withdrawn more than an average of 125 million gallons or
() X ()	Yes No Don't know	

	ner/Permittee Name: <b>CPFilms Inc</b> ne of Facility: <b>CPFilms Inc</b>
VPI	DES Permit Number: VA0072354
7. <b>X</b> ⊠	Does your facility use 25% or more of the total water withdrawn exclusively for cooling purposes? Yes No Don't know
8. <b>X</b> ⊗ ⊙ ⊙	Does your facility <u>currently employ</u> any of the following measures to reduce impingement mortality and entrainment? (Check all that may apply): Closed-cycle re-circulating cooling water system Variable speed pumps Seasonal flow reductions Wastewater reclamation/reuse
() () () () ()	Intakes with maximum design through-screen velocities of 0.5 feet per second, or less Intakes with actual through-screen velocities operated at 0.5 feet per second, or less Existing offshore velocity caps Modified traveling screens Intake screen mesh materials with maximum opening sizes of 0.56-inch (14 millimeters), or less
() () () () () ()	Cylindrical wedgewire screens Barrier nets Aquatic Filter Barriers Other
9. I	Within the next 5-10 years, does your facility plan to employ or install any of the following measures to reduce impingement mortality and entrainment? (Check all that may apply): Closed-cycle re-circulating cooling water system Variable speed pumps Seasonal flow reductions Wastewater reclamation/reuse
	Intakes with maximum design through-screen velocities of 0.5 feet per second, or less Intakes with actual through-screen velocities operated at 0.5 feet per second, or less Existing offshore velocity caps  Modified traveling screens
	Intake screen mesh materials with maximum opening sizes of 0.56-inch (14 millimeters), or less Cylindrical wedgewire screens Barrier nets Aquatic Filter Barriers
	Other
্র	Has your facility previously completed any studies relating to impingement mortality and/or entrainment at the cooling water intake structure?  Yes. Date(s) of studies: No.

11. Do you anticipate adding any new cooling systems at your facility in the r				
	next 5 years?			
© Yes				
X No				
□ Don't know				
12. What is your current status in compiling the following information pursuar	nt to 40 CFR §12	22.21(r)?		
	Completed	Initiated	Not Yet Begun	Other
(r)(2) Source water physical data	্ৰ	X		Ō
(r)(3) Cooling water intake structure data	্	Х	<u></u>	<u>(</u> )
· · · · · · · · · · · · · · · · · · ·	্র	X		<u>:</u>
(1)(4) Source water baseline biological characterization data				
	<u>[]</u>	X	<u>(\$)</u>	<u>[]</u>
(r)(5) Cooling water system data	ූම ard මු	<b>X</b> [∑	<u></u>	
(r)(5) Cooling water system data (r)(6) Chosen Method of Compliance with Impingement Mortality Standa	<u> </u>			N/
(r)(5) Cooling water system data (r)(6) Chosen Method of Compliance with Impingement Mortality Standa	ූම ard මු	<u>(5)</u>	<u></u>	N// N//
(r)(5) Cooling water system data (r)(6) Chosen Method of Compliance with Impingement Mortality Standa (r)(7) Previous Entrainment Performance Studies (r)(8) Operational Status	© ard © ©		(3) (3)	N/. N/.
<ul> <li>(r)(5) Cooling water system data</li> <li>(r)(6) Chosen Method of Compliance with Impingement Mortality Standa</li> <li>(r)(7) Previous Entrainment Performance Studies</li> </ul>	© ard © ©		(3) (3)	N/ N/ N/
(r)(5) Cooling water system data (r)(6) Chosen Method of Compliance with Impingement Mortality Standa (r)(7) Previous Entrainment Performance Studies (r)(8) Operational Status  For Facilities withdrawing more than 150 MGD: Not Applicable	(C) Ard (C) (C) (C)	(6) (7) (7)	ତ ତ ତ Not Yet Begun ତ	N/. N/. N/. Other
(r)(5) Cooling water system data (r)(6) Chosen Method of Compliance with Impingement Mortality Standa (r)(7) Previous Entrainment Performance Studies (r)(8) Operational Status  For Facilities withdrawing more than 150 MGD: Not Applicable (r)(9) Entrainment Characterization Study	© ard © ⊚ ⊙ Completed	⊚ ⊙ ⊙ Initiated	ে ়ে ়ে Not Yet Begun	N/. N/. N/.
(r)(5) Cooling water system data (r)(6) Chosen Method of Compliance with Impingement Mortality Standa (r)(7) Previous Entrainment Performance Studies (r)(8) Operational Status  For Facilities withdrawing more than 150 MGD: Not Applicable  (r)(9) Entrainment Characterization Study (r)(10) Comprehensive Technical Feasibility and Cost Evaluation Study	© O O O O O O O O O O O O O O O O O O O	© ☑ ☑ Initiated ☑	© ⊙ ⊙ Not Yet Begun ⊚ ⊙ ⊙	N/A N/A N/A Other ⑤ ⑤ ⑤
(r)(5) Cooling water system data (r)(6) Chosen Method of Compliance with Impingement Mortality Standa (r)(7) Previous Entrainment Performance Studies (r)(8) Operational Status  For Facilities withdrawing more than 150 MGD: Not Applicable (r)(9) Entrainment Characterization Study	Completed	© ☑ ☑ Initiated ☑ ☑	© ଔ ଔ Not Yet Begun ଔ ଔ	N/A N/A N/A Other Si











THE LEADER IN ENVIRONMENTAL TESTING

### **ANALYTICAL REPORT**

TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue Savannah, GA 31404 Tel: (912)354-7858

TestAmerica Job ID: 680-115019-1

Client Project/Site: Solutia - Outfalls Martinsville VA

For:

Solutia Inc. 575 Maryville Centre Dr. Saint Louis, Missouri 63141

Attn: Mr. William G Johnson

Michele RKusey

Authorized for release by: 8/7/2015 3:02:44 PM

Michele Kersey, Project Manager I (912)354-7858 michele.kersey@testamericainc.com

LINKS .....

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Solutia Inc. Project/Site: Solutia - Outfalls Martinsville VA

# **Table of Contents**

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Method Summary	6
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	8
QC Sample Results	10
QC Association Summary	13
Lab Chronicle	15
Chain of Custody	
Receipt Checklists	17
Certification Summary	

#### **Case Narrative**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

Job ID: 680-115019-1

Laboratory: TestAmerica Savannah

**Narrative** 

#### CASE NARRATIVE

Client: Solutia Inc.

Project: Solutia - Outfalls Martinsville VA

Report Number: 680-115019-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

#### RECEIPT

The samples were received on 7/30/2015 8:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

#### TOTAL SUSPENDED SOLIDS

Samples OUTFALL #5 (680-115019-1) and OUTFALL #7 (680-115019-2) were analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 07/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### TOTAL KJELDAHL NITROGEN (TKN)

Samples OUTFALL #5 (680-115019-1) and OUTFALL #7 (680-115019-2) were analyzed for total kjeldahl nitrogen (TKN) in accordance with EPA Method 351.2. The samples were prepared on 08/06/2015 and analyzed on 08/07/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### NITRATE-NITRITE AS NITROGEN

Samples OUTFALL #5 (680-115019-1) and OUTFALL #7 (680-115019-2) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 07/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### TOTAL PHOSPHORUS

Samples OUTFALL #5 (680-115019-1) and OUTFALL #7 (680-115019-2) were analyzed for total phosphorus in accordance with EPA Method 365.4. The samples were prepared on 08/06/2015 and analyzed on 08/07/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### CHEMICAL OXYGEN DEMAND

Samples OUTFALL #5 (680-115019-1) and OUTFALL #7 (680-115019-2) were analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were analyzed on 08/03/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **BIOCHEMICAL OXYGEN DEMAND**

Samples OUTFALL #5 (680-115019-1) and OUTFALL #7 (680-115019-2) were analyzed for Biochemical Oxygen Demand in accordance with SM 5210B. The samples were analyzed on 07/30/2015.

### **Case Narrative**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

Job ID: 680-115019-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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### Sample Summary

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

Lab Sample ID	Client Sample ID	Matrix	Collected Received	
680-115019-1	OUTFALL #5	Water	07/28/15 20:00 07/30/15 08:15	5
680-115019-2	OUTFALL #7	Water	07/28/15 20:00 07/30/15 08:15	5

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### **Method Summary**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

Method	Method Description	Protocol	Laboratory
2540 D-2011	Total Suspended Solids Dried at 103-105°C	SM	TAL SAV
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SAV
365.4	Phosphorus, Total	EPA	TAL SAV
410.4	COD	MCAWW	TAL SAV
5210B-2011	BOD, 5-Day	SM	TAL SAV

#### Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

#### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

Toxicity Equivalent Quotient (Dioxin)

### Qualifiers

#### **General Chemistry**

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

TEQ

Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

### **Client Sample Results**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

Lab Sample ID: 680-115019-1

Matrix: Water

Client Sample ID: OUTFALL #5
Date Collected: 07/28/15 20:00

Date Received: 07/30/15 08:15

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	4.9	The same of the same of	1.0	1.0	mg/L	. 1819	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	07/30/15 15:05	1
Nitrogen, Kjeldahl	2.2		0.20	0.10	mg/L		08/06/15 14:24	08/07/15 10:10	1
Nitrate Nitrite as N	0.34		0.050	0.010	mg/L			07/30/15 12:57	1
Phosphorus	0.10	U	0.10	0.041	mg/L		08/06/15 14:24	08/07/15 10:10	1
Chemical Oxygen Demand	46		10	5.0	mg/L			08/03/15 09:51	1
Biochemical Oxygen Demand	23		2.0	2.0	mg/L			07/30/15 15:44	1

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### **Client Sample Results**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

Lab Sample ID: 680-115019-2

Matrix: Water

Client Sample ID: OUTFALL #7

Date Collected: 07/28/15 20:00 Date Received: 07/30/15 08:15

General Chemistry Analyte Re	sult Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	27	2.0	2.0	mg/L	124		07/30/15 15:01	1
	0.84	0.20	0.10	mg/L		08/06/15 14:24	08/07/15 10:11	1
	0.40	0.050	0.010	mg/L			07/30/15 13:05	1
	.098 J	0.10	0.041	mg/L		08/06/15 14:24	08/07/15 10:11	1
Chemical Oxygen Demand	19	10	5.0	mg/L			08/03/15 09:51	1
Biochemical Oxygen Demand	4.3	2.0	2.0	mg/L			07/30/15 15:55	1

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RI

1.0

Spike

Added

20.0

Spike

Added

20.0

MDL Unit

LCS LCS

LCSD LCSD

DU DU

27.0

Result Qualifier

MDL Unit

0.10 mg/L

LCS LCS

1.99

Result Qualifier

23.5

Result Qualifier

23.5

Result Qualifier

1.0 mg/L

Unit

mg/L

Unit

mg/L

Unit

mg/L

Unit

mg/L

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

%Rec.

Limits

80 120

%Rec.

Limits

80 - 120

Client Sample ID: OUTFALL #7

Client Sample ID: Method Blank

08/06/15 14:24 08/07/15 10:01

Client Sample ID: Lab Control Sample

%Rec.

Limits

75 - 125

Prepared

%Rec

D %Rec

D

D

Prepared

D %Rec

100

118

118

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 394913

Prep Type: Total/NA

Prep Batch: 394913

Analyzed

RPD

0.7

RPD

0

Analyzed

07/30/15 14:16

Dil Fac

RPD

Limit

RPD

Limit

Dil Fac

5

25

Method: 2540 D-2011 - Total Suspended Solids Dried at 103-105°C

MB MB

1.0 U

MR MR

0.20 U

Result Qualifier

MB MB

Result Qualifier

Lab Sample ID: MB 680-393929/1

Matrix: Water

Analysis Batch: 393929

Total Suspended Solids

Lab Sample ID: LCS 680-393929/2 Matrix: Water

Analysis Batch: 393929

Analyte Total Suspended Solids

Lab Sample ID: LCSD 680-393929/3 **Matrix: Water** 

Analysis Batch: 393929

Total Suspended Solids

Lab Sample ID: 680-115019-2 DU **Matrix: Water** 

Analysis Batch: 393929

Analyte Total Suspended Solids

Sample Sample

Result Qualifier 27

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 680-394913/1-A

**Matrix: Water** 

Analysis Batch: 395039

Analyte Nitrogen, Kjeldahl

Lab Sample ID: LCS 680-394913/2-A

**Matrix: Water** 

Analysis Batch: 395039

Analyte

Nitrogen, Kjeldahl

Lab Sample ID: MB 680-393947/13

Matrix: Water

Analysis Batch: 393947

Nitrate Nitrite as N

Method: 353.2 - Nitrogen, Nitrate-Nitrite

RL Result Qualifier 0.050 U

0.050

RI

0.20

Spike

Added

2.00

**MDL** Unit 0.010 mg/L

Prepared

Analyzed

07/30/15 12:18

Dil Fac

Client Sample ID: Method Blank Prep Type: Total/NA

Client Sample ID: Lab Control Sample

%Rec

105

104

D

%Rec.

Limits

90 - 110

90 - 110

Client Sample ID: OUTFALL #5

Client Sample ID: OUTFALL #5

Client Sample ID: Lab Control Sample

Client Sample ID: Method Blank

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: MB 680-393947/44

**Matrix: Water** 

Analysis Batch: 393947

MR MR

0.050 U

Result Qualifier

RI 0.050

> LCS LCS Result Qualifier

> > 1.05

0.520

MDI Unit D Prepared 0.010 mg/L

Unit

mg/L

mg/L

Analyzed 07/30/15 12:55

Prep Type: Total/NA

Dil Fac

Lab Sample ID: LCS 680-393947/16

**Matrix: Water** 

Nitrate Nitrite as N

Nitrate Nitrite as N

Analysis Batch: 393947

Analyte

Nitrite as N

Lab Sample ID: LCS 680-393947/45 **Matrix: Water** 

Analysis Batch: 393947

%Rec. LCS LCS Spike Limits D %Rec Result Qualifier Unit Added Analyte 90 110 1.02 102 1.00 mg/L Nitrate Nitrite as N 90 - 110 104 0.522 mg/L 0.500 Nitrite as N

Spike

Added

1.00

0.500

Lab Sample ID: 680-115019-1 MS

**Matrix: Water** 

Analysis Batch: 393947

Spike %Rec. MS MS Sample Sample D %Rec Limits Result Qualifier Unit Added Result Qualifier Analyte 90 - 110 94 1.28 mg/L 0.34 1.00 Nitrate Nitrite as N 104 90 - 110 0.534 mg/L 0.013 J 0.500 Nitrite as N

Lab Sample ID: 680-115019-1 MSD

Matrix: Water

Analysis Batch: 393947

%Rec. RPD Sample Sample Spike MSD MSD Limits RPD Limit D %Rec Result Qualifier Added Result Qualifier Unit Analyte 10 90 110 0 94 0.34 1.00 1.28 mg/L Nitrate Nitrite as N 90 - 110 0 10 104 0.013 J 0.500 0.533 mg/L Nitrite as N

RL

0.10

Spike

Added

2.00

MDL Unit

0.041 mg/L

LCS LCS

2.08

Result Qualifier

Unit

mg/L

Method: 365.4 - Phosphorus, Total

Lab Sample ID: MB 680-394913/1-A

**Matrix: Water** 

Phosphorus

Analysis Batch: 395038

MR MR

Result Qualifier Analyte 0.10 U

Phosphorus

Lab Sample ID: LCS 680-394913/2-A

Matrix: Water

Analysis Batch: 395038

Analyte

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 394913

Dil Fac

Analyzed

Client Sample ID: Lab Control Sample Prep Type: Total/NA

08/06/15 14:24 08/07/15 10:01

Prepared

D

Prep Batch: 394913 %Rec.

%Rec Limits 60 - 140 104

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

%Rec.

Limits

90 - 110

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

Method: 410.4 - COD

Lab Sample ID: MB 680-394288/3

**Matrix: Water** 

Analysis Batch: 394288

Prep Type: Total/NA

 Analyte
 Result
 Qualifier
 RL
 MDL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chemical Oxygen Demand
 10
 U
 10
 5.0
 mg/L
 08/03/15 09:51
 1

Lab Sample ID: LCS 680-394288/4

**Matrix: Water** 

Analysis Batch: 394288

Spike LCS LCS

Analyte Added Result Qualifier Unit D %Rec

Chemical Oxygen Demand 50.0 47.0 mg/L 94

Chemical Oxygen Demand 50.0 47.0 mg/

Method: 5210B-2011 - BOD, 5-Day

Lab Sample ID: USB 680-393977/1

**Matrix: Water** 

Analysis Batch: 393977

USB USB

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac

Biochemical Oxygen Demand 2.0 U 2.0 2.0 mg/L 07/30/15 15:01 1

Lab Sample ID: LCS 680-393977/2

Matrix: Water

Analysis Batch: 393977

 Analyte
 Added Biochemical Oxygen Demand
 Result 198
 LCS LCS LCS LCS WRec.
 %Rec. Limits mg/L

 209
 mg/L
 105
 85 - 115

Lab Sample ID: LCSD 680-393977/3

**Matrix: Water** 

Analysis Batch: 393977

%Rec. **RPD** LCSD LCSD Spike D %Rec Limits RPD Limit Result Qualifier Unit Added Analyte 104 85 - 115 206 mg/L 198 Biochemical Oxygen Demand

### **QC Association Summary**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

A I-	!-	Databa	202020
Analy	SIS	Batch:	393929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-115019-1	OUTFALL #5	Total/NA	Water	2540 D-2011	
680-115019-2	OUTFALL #7	Total/NA	Water	2540 D-2011	
680-115019-2 DU	OUTFALL #7	Total/NA	Water	2540 D-2011	
LCS 680-393929/2	Lab Control Sample	Total/NA	Water	2540 D-2011	
LCSD 680-393929/3	Lab Control Sample Dup	Total/NA	Water	2540 D-2011	
MB 680-393929/1	Method Blank	Total/NA	Water	2540 D-2011	

#### Analysis Batch: 393947

nalysis Batch: 393	929				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-115019-1	OUTFALL #5	Total/NA	Water	2540 D-2011	
680-115019-2	OUTFALL #7	Total/NA	Water	2540 D-2011	
680-115019-2 DU	OUTFALL #7	Total/NA	Water	2540 D-2011	
LCS 680-393929/2	Lab Control Sample	Total/NA	Water	2540 D-2011	
LCSD 680-393929/3	Lab Control Sample Dup	Total/NA	Water	2540 D-2011	
MD 000 000000M	Mathad Dlank	Total/NA	Water	2540 D-2011	
MB 680-393929/1 nalysis Batch: 393					D D
nalysis Batch: 393	947 Client Sample ID	Prep Type	Matrix	Method	Prep Batch
nalysis Batch: 393 Lab Sample ID 680-115019-1	Client Sample ID OUTFALL #5	Prep Type Total/NA	Matrix Water	Method 353.2	Prep Batch
nalysis Batch: 393 Lab Sample ID 680-115019-1 680-115019-1 MS	Client Sample ID OUTFALL #5 OUTFALL #5	Prep Type	Matrix	Method	Prep Batch
nalysis Batch: 393 Lab Sample ID 680-115019-1	Client Sample ID OUTFALL #5	Prep Type Total/NA Total/NA	<b>Matrix</b> Water Water	Method 353.2 353.2	Prep Batch
nalysis Batch: 393 Lab Sample ID 680-115019-1 680-115019-1 MS 680-115019-1 MSD	Client Sample ID OUTFALL #5 OUTFALL #5 OUTFALL #5	Prep Type Total/NA Total/NA Total/NA	Matrix Water Water Water	Method 353.2 353.2 353.2	Prep Batch
nalysis Batch: 393 Lab Sample ID 680-115019-1 680-115019-1 MS 680-115019-1 MSD 680-115019-2	Client Sample ID OUTFALL #5 OUTFALL #5 OUTFALL #5 OUTFALL #7	Prep Type Total/NA Total/NA Total/NA Total/NA	Matrix Water Water Water Water	Method 353.2 353.2 353.2 353.2	Prep Batch
nalysis Batch: 393 Lab Sample ID 680-115019-1 680-115019-1 MS 680-115019-1 MSD 680-115019-2 LCS 680-393947/16	Client Sample ID OUTFALL #5 OUTFALL #5 OUTFALL #5 OUTFALL #7 Lab Control Sample	Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA	Matrix Water Water Water Water Water Water	Method 353.2 353.2 353.2 353.2 353.2	Prep Batch

#### Analysis Batch: 393977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-115019-1	OUTFALL #5	Total/NA	Water	5210B-2011	
680-115019-2	OUTFALL #7	Total/NA	Water	5210B-2011	
LCS 680-393977/2	Lab Control Sample	Total/NA	Water	5210B-2011	
LCSD 680-393977/3	Lab Control Sample Dup	Total/NA	Water	5210B-2011	
USB 680-393977/1	Method Blank	Total/NA	Water	5210B-2011	

#### Analysis Batch: 394288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-115019-1	OUTFALL #5	Total/NA	Water	410.4	
680-115019-2	OUTFALL #7	Total/NA	Water	410.4	
LCS 680-394288/4	Lab Control Sample	Total/NA	Water	410.4	
MB 680-394288/3	Method Blank	Total/NA	Water	410.4	

#### Prep Batch: 394913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-115019-1	OUTFALL #5	Total/NA	Water	Digestion	
680-115019-2	OUTFALL #7	Total/NA	Water	Digestion	
LCS 680-394913/2-A	Lab Control Sample	Total/NA	Water	Digestion	
MB 680-394913/1-A	Method Blank	Total/NA	Water	Digestion	

#### Analysis Batch: 395038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-115019-1	OUTFALL #5	Total/NA	Water	365.4	394913
680-115019-2	OUTFALL #7	Total/NA	Water	365.4	394913
LCS 680-394913/2-A	Lab Control Sample	Total/NA	Water	365.4	394913
MB 680-394913/1-A	Method Blank	Total/NA	Water	365.4	394913

#### Analysis Batch: 395039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-115019-1	OUTFALL #5	Total/NA	Water	351.2	394913
680-115019-2	OUTFALL #7	Total/NA	Water	351.2	394913

TestAmerica Savannah

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### **QC Association Summary**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

TestAmerica Job ID: 680-115019-1

### **General Chemistry (Continued)**

Analysis Batch: 395039 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-394913/2-A	Lab Control Sample	Total/NA	Water	351.2	394913
MB 680-394913/1-A	Method Blank	Total/NA	Water	351.2	394913

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Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

Client Sample ID: OUTFALL #5

Date Collected: 07/28/15 20:00 Date Received: 07/30/15 08:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540 D-2011		1 -	393929	07/30/15 15:05	KLD	TAL SAV
Total/NA	Prep	Digestion			394913	08/06/15 14:24	JRJ	TAL SAV
Total/NA	Analysis	351.2		1	395039	08/07/15 10:10	JER	TAL SAV
Total/NA	Analysis	353.2		1	393947	07/30/15 12:57	GRX	TAL SAV
Total/NA	Prep	Digestion			394913	08/06/15 14:24	JRJ	TAL SAV
Total/NA	Analysis	365.4		1	395038	08/07/15 10:10	JER	TAL SAV
Total/NA	Analysis	410.4		1	394288	08/03/15 09:51	JRJ	TAL SAV
Total/NA	Analysis	5210B-2011		1	393977	07/30/15 15:44	OLB	TAL SAV

Client Sample ID: OUTFALL #7

Date Collected: 07/28/15 20:00

Matrix: Water

Date Collected: 07/28/15 20:00 Date Received: 07/30/15 08:15

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	2540 D-2011		1	393929	07/30/15 15:01	KLD	TAL SAV
Total/NA	Prep	Digestion			394913	08/06/15 14:24	JRJ	TAL SAV
Total/NA	Analysis	351.2		1	395039	08/07/15 10:11	JER	TAL SAV
Total/NA	Analysis	353.2		1	393947	07/30/15 13:05	GRX	TAL SAV
Total/NA	Prep	Digestion			394913	08/06/15 14:24	JRJ	TAL SAV
Total/NA	Analysis	365.4		1	395038	08/07/15 10:11	JER	TAL SAV
Total/NA	Analysis	410.4		1	394288	08/03/15 09:51	JRJ	TAL SAV
Total/NA	Analysis	5210B-2011		1	393977	07/30/15 15:55	OLB	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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### TestAmerica Savannah

Phone (912) 354-7858 Fax (912) 352-0165

5102 LaRoche Avenue Savannah, GA 31404

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### **Chain of Custody Record**



THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler Teddly Mostey Lab Pi Phone E-Mai					chele R				Сапк	Carrier Tracking No(s)				COC No. 680-65645-28173.1				
Client Contact Ms. Sandra Warner	276-6	<u> </u>	30	E-Mail		sey@testamericainc.com				1	1				Page: Page 1 c	of 1	<u> </u>		
Company			<del></del>	Innoise	ic.neis	Analysis Requested													
Solutia Inc. Address	Due Date Requeste	ıd:		1	::144			Αr	alysi	s Re	ques	ted	_	1 1	(f1)	Preserva	tion Code		
1116 South Main St City	TAT Requested (da					ł				-						A-HCL		M - Hexane	
Blacksburg	TAT Requested (da	, 		77.			1 1								17	B - NaOH C - Zn Ace	etate	N - None O - AsNaO2	
State, Zip. VA, 24060		i		H								1 1				D - Nitric A E - NaHS0	<b>D4</b>	P - Na2O4S Q - Na2SO3	
Phone	PO#		50									1 1			12	F - MeOH G - Amchi	or	R - Na2S2SO3 S - H2SO4	
Email.	See Project Note WO #:	as for 2015	PO			man									143	H - Ascort		T - TSP Dodeca U - Acetone	hydrate
swarner@chacompanies.com Project Name:	Project#	<u> </u>				eg E	묠								9,61	J - DI Wat K - EDTA		V - MCAA W - ph 4-5	
Solutia - Outfalls / Martinsville VA	68006254	!				to+Ni	8 8								intelifia	L - EDA		Z - other (specify	ý)
Sitte.	SSOW#.					Nitra	Suspended	4	Grease						2	Other:			
		:	Sample Ma	trix		353.2 • Nitrogen,	Sus le	4, 410.4	8		-				100				
		. 1	Type (w	wrater,		ž ž	160.2 - Total	,366,	- 0						Total Rimbia				
Sample Identification	Sample Date	Sample Time	(C=Comp, o=w	rste/oil, ue, A=A/r)		353.2	160.2	351.2,	1664A - Oll &						Š	S	ecial Ins	structions/No	te:
	冒業	以表面	Preservations	iiidi.	XX	N, W	N.	S.	š!j :	lli i!	998	iiiii		理				tructions/No	गाम्भः
OUTFAIT #5	72875	20:00	Cw	ater	N N	$\chi \rangle$	$\langle \chi \rangle$	X	$X \perp$						1	RAIN	EDE	ENT	
OUTFAIL #7	7.28.15	20:00	w <u>ٿ</u>	ater	MN	$X \rangle$		X	X						7	STOP	tel @	6:30 P	M
•		'	w	ater							<u> </u>					End	ed C	8:00 P	M
			W	ater							<u> </u>					0.	25 z	y. & RAI	íγ
		i	W	ater												Fe	<u>[</u> ]		
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	Date/Time	1	Comp				oy											, ,	
Relinquished by:	Date/Time	ı	Comp	_		Receive	•						υ	te/Time:				Company	
Custody Seals Intact: Custody Seal No.:	65	<u> </u>	11206	₹ <u></u>		Cooler	Tempera	iture(s	°C and	Other	Remark	us .				2.8	(F	)3.3	م

### **Login Sample Receipt Checklist**

Job Number: 680-115019-1 Client: Solutia Inc.

Login Number: 115019

List Number: 1 Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

List Source: TestAmerica Savannah

### **Certification Summary**

Client: Solutia Inc.

Project/Site: Solutia - Outfalls Martinsville VA

Laboratory: TestAmerica Savannah
All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID SAVLAB	Expiration Dat
	AFCEE			00 00 17
A2LA	DoD ELAP		399.01	02-28-17
A2LA	ISO/IEC 17025		399.01	02-28-17
Alabama	State Program	4	41450	06-30-15 *
Arkansas DEQ	State Program	6	88-0692	01-31-16
California	State Program	9	2939	07-31-16
Colorado	State Program	8	N/A	12-31-15
Connecticut	State Program	1	PH-0161	03-31-17
Florida	NELAP	4	E87052	06-30-16
GA Dept. of Agriculture	State Program	4	N/A	06-12-17
Georgia	State Program	4	803	06-30-16
Guam	State Program	9	14-004r	04-16-16
Hawaii	State Program	9	N/A	06-30-16
Illinois	NELAP	5	200022	11-30-15
Indiana	State Program	5	N/A	06-30-15 *
lowa	State Program	7	353	06-30-17
Kentucky (DW)	State Program	4	90084	12-31-15
Kentucky (UST)	State Program	4	18	06-30-16
Kentucky (WW)	State Program	4	90084	12-31-15
Louisiana	NELAP	6	30690	06-30-15 *
Louisiana (DW)	NELAP	6	LA150014	12-31-15
Maine	State Program	1	GA00006	09-24-16
Maryland	State Program	3	250	12-31-15
Massachusetts	State Program	1	M-GA006	06-30-16
Michigan	State Program	5	9925	06-30-15 *
Mississippi	State Program	4	N/A	06-30-15 *
Montana	State Program	8	CERT0081	12-31-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-16
New Jersey	NELAP	2	GA769	09-30-15
New Mexico	State Program	6	N/A	06-30-16
New York	NELAP	2	10842	03-31-16
North Carolina (DW)	State Program	4	13701	07-31-16
North Carolina (WW/SW)	State Program	4	269	12-31-15
Oklahoma	State Program	6	9984	08-31-15 *
Pennsylvania	NELAP	3	68-00474	06-30-16
Puerto Rico	State Program	2	GA00006	12-31-15
South Carolina	State Program	4	98001	06-30-15 *
	State Program	4	TN02961	06-30-16
Tennessee	NELAP	6	T104704185-14-7	11-30-15
Texas	Federal	J	SAV 3-04	06-11-17
USDA Virginia	NELAP	3	460161	06-14-16
Virginia Washington	State Program	10	C805	06-10-16
Washington	State Program	3	9950C	12-31-15
West Virginia (DW)	State Program State Program	3	094	06-30-16
West Virginia DEP		5	999819810	08-31-15 *
Wisconsin	State Program			06-30-16
Wyoming	State Program	8	8TMS-L	00-30-10

<sup>\*</sup> Certification renewal pending - certification considered valid.



# <u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

### ANALYTICAL REPORT

TestAmerica Laboratories, Inc. TestAmerica Savannah 5102 LaRoche Avenue Savannah, GA 31404 Tel: (912)354-7858

TestAmerica Job ID: 680-117005-1

Client Project/Site: Solutia VPDES Outfall Martinsville VA

Revision: 1

For:

Solutia Inc.

1116 South Main St.

Blacksburg, Virginia 24060

Attn: Ms. Sandra Warner

Michele RKusey

Authorized for release by: 10/8/2015 2:09:26 PM

Michele Kersey, Project Manager I (912)354-7858 michele.kersey@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Have a Question?



Visit us at: www.testamericainc.com

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Certification Summary	

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Job ID: 680-117005-1

Laboratory: TestAmerica Savannah

Narrative

#### **CASE NARRATIVE**

Client: Solutia Inc.

Project: Solutia VPDES Outfall Martinsville VA

Report Number: 680-117005-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

#### RECEIPT

The samples were received on 9/23/2015 8:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

#### **OIL AND GREASE AND TPH**

Samples Outfall 005 (680-117005-1) and Outfall 007 (680-117005-2) were analyzed for Oil and Grease and TPH in accordance with EPA Method 1664A. The samples were prepared and analyzed on 09/24/2015.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with 402659.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **TOTAL SUSPENDED SOLIDS**

Samples Outfall 005 (680-117005-1) and Outfall 007 (680-117005-2) were analyzed for total suspended solids in accordance with SM 2540D. The samples were analyzed on 09/24/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### TOTAL KJELDAHL NITROGEN (TKN)

Samples Outfall 005 (680-117005-1) and Outfall 007 (680-117005-2) were analyzed for total kjeldahl nitrogen (TKN) in accordance with EPA Method 351.2. The samples were prepared on 10/01/2015 and analyzed on 10/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **NITRATE-NITRITE AS NITROGEN**

Samples Outfall 005 (680-117005-1) and Outfall 007 (680-117005-2) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 09/23/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **TOTAL PHOSPHORUS**

Samples Outfall 005 (680-117005-1) and Outfall 007 (680-117005-2) were analyzed for total phosphorus in accordance with EPA Method 365.4. The samples were prepared on 10/01/2015 and analyzed on 10/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **Case Narrative**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

### 3

### Job ID: 680-117005-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

#### **CHEMICAL OXYGEN DEMAND**

Samples Outfall 005 (680-117005-1) and Outfall 007 (680-117005-2) were analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were analyzed on 09/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### **Sample Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Lab Sample ID	Client Sample ID	Matrix	Collected Received
680-117005-1	Outfall 005	Water	09/21/15 04:00 09/23/15 08:10
680-117005-2	Outfall 007	Water	09/21/15 04:10 09/23/15 08:10

### **Method Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Method	Method Description	Protocol	Laboratory
1664A	HEM and SGT-HEM	1664A	TAL SAV
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL SAV
365.4	Phosphorus, Total	EPA	TAL SAV
410.4	COD	MCAWW	TAL SAV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL SAV

### 5

#### **Protocol References:**

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

#### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

### **Definitions/Glossary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

ua		

General	Chemistry
---------	-----------

Qualifier	Qualifier Description
	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
m .	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

### **Client Sample Results**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Lab Sample ID: 680-117005-1 Client Sample ID: Outfall 005

Date Collected: 09/21/15 04:00 Date Received: 09/23/15 08:10

Matrix: Water

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	5.0	U	5.0	1.4	mg/L		09/24/15 08:23	09/24/15 10:56	1
Nitrogen, Kjeldahl	0.95		0.20	0.10	mg/L		10/01/15 11:23	10/02/15 10:33	1
Nitrate Nitrite as N	0.30		0.050	0.010	mg/L			09/23/15 11:54	1
Phosphorus	0.10	U	0.10	0.041	mg/L		10/01/15 11:23	10/02/15 10:33	1
Chemical Oxygen Demand	18		10	5.0	mg/L			09/30/15 09:42	1
Total Suspended Solids	7.2		1.0	1.0	mg/L			09/24/15 12:57	1

Client Sample ID: Outfall 007

Date Collected: 09/21/15 04:10 Date Received: 09/23/15 08:10

Lab Sample ID: 680-117005-2 Matrix: Water

General Chemistry  Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	4.7	U	4.7	1.3	mg/L		09/24/15 08:23	09/24/15 10:56	1
Nitrogen, Kjeldahl	1.1		0.20	0.10	mg/L		10/01/15 11:23	10/02/15 10:37	1
Nitrate Nitrite as N	0.38		0.050	0.010	mg/L			09/23/15 11:53	1
Phosphorus	0.10	U	0.10	0.041	mg/L		10/01/15 11:23	10/02/15 10:37	1
Chemical Oxygen Demand	26		10	5.0	mg/L			09/30/15 09:42	1
Total Suspended Solids	17		4.0	4.0	mg/L			09/24/15 12:57	1

#### QC Sample Results

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 680-402595/14-A Matrix: Water

Analysis Batch: 402659

мв мв

HEM (Oil & Grease)

Result Qualifier

5.0 U

RL 5.0 **MDL** Unit 1.4 mg/L Prepared

Analyzed

Prep Type: Total/NA Prep Batch: 402595

Dil Fac

09/24/15 08:23 09/24/15 10:56

Client Sample ID: Lab Control Sample

TestAmerica Job ID: 680-117005-1

Client Sample ID: Method Blank

Lab Sample ID: LCS 680-402595/15-A

**Matrix: Water** 

Analysis Batch: 402659

Analyte

HEM (Oil & Grease)

LCS LCS Spike Added

Result Qualifier 32.6

Unit %Rec mg/L

Limits

%Rec.

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 402595

Prep Type: Total/NA

Prep Batch: 403761

Prep Type: Total/NA Prep Batch: 403761

Prep Type: Total/NA

Prep Batch: 403761

Prep Type: Total/NA Prep Batch: 403761

Prep Type: Total/NA Prep Batch: 402595

Lab Sample ID: LCSD 680-402595/16-A Matrix: Water

Analysis Batch: 402659

Analyte HEM (Oil & Grease)

Spike Added

40.0

Spike

Added

2.00

Spike

Added

2.00

40.0

LCSD LCSD Result Qualifier 33.4

Unit mg/L

%Rec 84 %Rec. Limits 78 - 114

RPD RPD Limit

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 680-403761/1-A

Matrix: Water

Analyte

Analysis Batch: 403978

Nitrogen, Kjeldahl

мв мв

0.20 U

Sample Sample Result Qualifier

0.95

Result Qualifier

RL 0.20 **MDL** Unit 0.10 mg/L

LCS LCS

MS MS

3 24

Result Qualifier

2.07

Result Qualifier

Prepared

**Analyzed** 10/01/15 11:23 10/02/15 10:31

Client Sample ID: Lab Control Sample

%Rec.

Limits

75 - 125

%Rec.

Limits

75 - 125

Client Sample ID: Outfall 005

Client Sample ID: Outfall 005

%Rec

104

%Rec

115

Client Sample ID: Method Blank

Lab Sample ID: LCS 680-403761/2-A

Matrix: Water

Analysis Batch: 403978

Analyte Nitrogen, Kjeldahl

Lab Sample ID: 680-117005-1 MS **Matrix: Water** 

Analysis Batch: 403978

Analyte Nitrogen, Kjeldahl

Lab Sample ID: 680-117005-1 MSD Matrix: Water Analysis Batch: 403978

Analyte

Nitrogen, Kjeldahl

Sample Sample

0.95

Result Qualifier

Added 2.00

Spike

MSD MSD Result Qualifier 3.12

Unit mg/L

Unit

mg/L

Unit

mg/L

D %Rec 109

Limits 75 - 125

%Rec.

RPD Limit 4

**RPD** 

### **QC Sample Results**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Client Sample ID: Method Blank

Client Sample ID: Method Blank

Method: 351.2 - Nitrogen	, Total Kjeldahl	(Continued)

Lab Sample ID: 680-117 Matrix: Water	005-2 DU					Clie	nt Sample ID: Outf Prep Type: To	
Analysis Batch: 403978							Prep Batch: 4	103761
	Sample	Sample	DU	DU			•	RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Nitrogen, Kjeldahl	1.1		0.930		mg/L		14	40

### Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 680-402469/13

Matrix: Water Analysis Batch: 402469								Prep Type: To	otal/NA
<b>,</b>	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.050	U	0.050	0.010	mg/L	 _		09/23/15 11:24	1

Lab Sample ID: LCS 680-402469/1 Matrix: Water Analysis Batch: 402469	5			Clie	nt Sai	mple ID	): Lab Control Sample Prep Type: Total/NA
/maryolo Batom 402400	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Nitrate Nitrite as N	1.00	1.04		mg/L		104	90 - 110

#### Method: 365.4 - Phosphorus, Total

Lab Sample ID: MB 680-403761/1-A

Matrix: Water Analysis Batch: 403977								Prep Type: To - Prep Batch: ۵	
•	MB	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus	0.10	U	0.10	0.041	mg/L		10/01/15 11:23	10/02/15 10:31	1

Lab Sample ID: LCS 680-403761/2-A Matrix: Water				Clie	nt Sar	nple ID	: Lab Control Sample Prep Type: Total/NA	
Analysis Batch: 403977	Spike	LCS	LCS				Prep Batch: 40376	
Analyte	Added		Qualifier	Unit	_ D	%Rec	Limits	_
Phosphorus	2.00	2.08		mg/L		104	60 - 140	

Lab Sample ID: 680-117009 Matrix: Water Analysis Batch: 403977							(	Client	Prep Typ Prep Ba	: Outfall 005 pe: Total/NA atch: 403761
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Phosphorus	0.10	U	2.00	2.09		mg/L		105	60 - 140	

Lab Sample ID: 680-117005 Matrix: Water Analysis Batch: 403977	-1 MSD						ı	Client Sample ID: Outfall 0 Prep Type: Total/l Prep Batch: 4037			al/NA
Analysis Batch. 400077	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Phosphorus	0.10	U	2.00	2.10		mg/L		105	60 - 140	0	40

### QC Sample Results

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Client Sample ID: Lab Control Sample

%Rec.

Prep Type: Total/NA

Method: 365.4	- Phosphorus,	Total (Continued)

Client Sample ID: Outfall 007 Lab Sample ID: 680-117005-2 DU Prep Type: Total/NA **Matrix: Water** Prep Batch: 403761 Analysis Batch: 403977 DU DU Sample Sample RPD Result Qualifier Limit Analyte Result Qualifier Unit NC 0.10 U 0.0726 J mg/L 40 Phosphorus

#### Method: 410.4 - COD

Client Sample ID: Method Blank Lab Sample ID: MB 680-403503/3 Prep Type: Total/NA **Matrix: Water** 

Analysis Batch: 403503

MB MB Dil Fac Result Qualifier RL **MDL** Unit Prepared Analyzed 10 09/30/15 09:42 10 U 5.0 mg/L Chemical Oxygen Demand

Lab Sample ID: LCS 680-403503/4

**Matrix: Water** Analysis Batch: 403503

Spike LCS LCS

Added Result Qualifier Unit %Rec Limits Analyte 50.0 52.9 mg/L 106 90 - 110 Chemical Oxygen Demand

#### Method: SM 2540D - Solids, Total Suspended (TSS)

Client Sample ID: Method Blank Lab Sample ID: MB 680-402720/1 Prep Type: Total/NA Matrix: Water

Analysis Batch: 402720

MB MB RL **MDL** Unit Prepared Analyzed Dil Fac Analyte Result Qualifier 1.0 mg/L 1.0 U 1.0 09/24/15 12:57 **Total Suspended Solids** 

Client Sample ID: Lab Control Sample Lab Sample ID: LCS 680-402720/2 **Matrix: Water** Prep Type: Total/NA

Analysis Batch: 402720

LCS LCS Spike %Rec. Added Limits Result Qualifier D %Rec Unit 20.0 105 80 - 120 21.0 mg/L **Total Suspended Solids** 

Client Sample ID: Lab Control Sample Dup Lab Sample ID: LCSD 680-402720/3 Prep Type: Total/NA Matrix: Water Analysis Batch: 402720 Spike LCSD LCSD %Rec. **RPD** 

Added Result Qualifier Unit %Rec Limits **RPD** Limit Analyte 20.0 23.0 mg/L 115 80 - 120 **Total Suspended Solids** 

### **QC Association Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

G	ene	ral	Ch	em	is	try

Anal	vsis	Batch:	402469
------	------	--------	--------

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	353.2	
680-117005-2	Outfall 007	Total/NA	Water	353.2	
LCS 680-402469/15	Lab Control Sample	Total/NA	Water	353.2	
MB 680-402469/13	Method Blank	Total/NA	Water	353.2	

#### **Prep Batch: 402595**

- Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	1664A	
680-117005-2	Outfall 007	Total/NA	Water	1664A	
LCS 680-402595/15-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 680-402595/16-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 680-402595/14-A	Method Blank	Total/NA	Water	1664A	

#### Analysis Batch: 402659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	1664A	402595
680-117005-2	Outfall 007	Total/NA	Water	1664A	402595
LCS 680-402595/15-A	Lab Control Sample	Total/NA	Water	1664A	402595
LCSD 680-402595/16-A	Lab Control Sample Dup	Total/NA	Water	1664A	402595
MB 680-402595/14-A	Method Blank	Total/NA	Water	1664A	402595

#### Analysis Batch: 402720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	SM 2540D	
680-117005-2	Outfall 007	Total/NA	Water	SM 2540D	
LCS 680-402720/2	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 680-402720/3	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 680-402720/1	Method Blank	Total/NA	Water	SM 2540D	

#### Analysis Batch: 403503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	410.4	
680-117005-2	Outfall 007	Total/NA	Water	410.4	
LCS 680-403503/4	Lab Control Sample	Total/NA	Water	410.4	
MB 680-403503/3	Method Blank	Total/NA	Water	410.4	

#### Prep Batch: 403761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	Digestion	
680-117005-1 MS	Outfall 005	Total/NA	Water	Digestion	
680-117005-1 MSD	Outfall 005	Total/NA	Water	Digestion	
680-117005-2	Outfall 007	Total/NA	Water	Digestion	
680-117005-2 DU	Outfall 007	Total/NA	Water	Digestion	
LCS 680-403761/2-A	Lab Control Sample	Total/NA	Water	Digestion	
MB 680-403761/1-A	Method Blank	Total/NA	Water	Digestion	

### Analysis Batch: 403977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	365.4	403761
680-117005-1 MS	Outfall 005	Total/NA	Water	365.4	403761
680-117005-1 MSD	Outfall 005	Total/NA	Water	365.4	403761

### **QC Association Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

### **General Chemistry (Continued)**

#### Analysis Batch: 403977 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-2	Outfall 007	Total/NA	Water	365.4	403761
680-117005-2 DU	Outfall 007	Total/NA	Water	365.4	403761
LCS 680-403761/2-A	Lab Control Sample	Total/NA	Water	365.4	403761
MB 680-403761/1-A	Method Blank	Total/NA	Water	365.4	403761

#### Analysis Batch: 403978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117005-1	Outfall 005	Total/NA	Water	351.2	403761
680-117005-1 MS	Outfall 005	Total/NA	Water	351.2	403761
680-117005-1 MSD	Outfall 005	Total/NA	Water	351.2	403761
680-117005-2	Outfall 007	Total/NA	Water	351.2	403761
680-117005-2 DU	Outfall 007	Total/NA	Water	351.2	403761
LCS 680-403761/2-A	Lab Control Sample	Total/NA	Water	351.2	403761
MB 680-403761/1-A	Method Blank	Total/NA	Water	351.2	403761

#### **Lab Chronicle**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Lab Sample ID: 680-117005-1

Matrix: Water

Client Sample ID: Outfall 005 Date Collected: 09/21/15 04:00

Date Received: 09/23/15 08:10

•	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	1664A			504 mL	500 mL	402595	09/24/15 08:23	ALS	TAL SAV
Total/NA	Analysis Instrume	1664A nt ID: NOEQUIP		1	504 mL	500 mL	402659	09/24/15 10:56	ALS	TAL SAV
Total/NA	Prep	Digestion			20 mL	20 mL	403761	10/01/15 11:23	JRJ	TAL SAV
Total/NA	Analysis	351.2 nt ID: LACHAT3		1	20 mL	20 mL	403978	10/02/15 10:33	JER	TAL SAV
Total/NA	Analysis Instrume	353.2 nt ID: LACHAT2		1	2 mL	2 mL	402469	09/23/15 11:54	GRX	TAL SAV
Total/NA	Prep	Digestion			20 mL	20 mL	403761	10/01/15 11:23	JRJ	TAL SAV
Total/NA	Analysis	365.4 nt ID: LACHAT3		1	20 mL	20 mL	403977	10/02/15 10:33	JER	TAL SAV
Total/NA	Analysis Instrume	410.4 int ID: SPC3		1	2 mL	2 mL	403503	09/30/15 09:42	JRJ	TAL SAV
Total/NA	Analysis Instrume	SM 2540D ent ID: NOEQUIP		1	1000 mL	1000 mL	402720	09/24/15 12:57	KLD	TAL SAV

Lab Sample ID: 680-117005-2

Matrix: Water

Client Sample ID: Outfall 007 Date Collected: 09/21/15 04:10 Date Received: 09/23/15 08:10

Γ	Batch	Batch		Dil	Initial	Final	Batch Number	Prepared or Analyzed	Analyst	Lab
Prep Type	Туре	Method	Run	Factor	Amount	Amount				
Total/NA	Prep	1664A			533 mL	500 mL	402595	09/24/15 08:23	ALS	TAL SAV
Total/NA	Analysis Instrume	1664A nt ID: NOEQUIP		1	533 mL	500 mL	402659	09/24/15 10:56	ALS	TAL SAV
Total/NA	Prep	Digestion			20 mL	20 mL	403761	10/01/15 11:23	JRJ	TAL SAV
Total/NA	Analysis Instrume	351.2 nt ID: LACHAT3		1	20 mL	20 mL	403978	10/02/15 10:37	JER	TAL SAV
Total/NA	Analysis Instrume	353.2 nt ID: LACHAT2		1	2 mL	2 mL	402469	09/23/15 11:53	GRX	TAL SAV
Total/NA	Prep	Digestion			20 mL	20 mL	403761	10/01/15 11:23	JRJ	TAL SAV
Total/NA	Analysis Instrume	365.4 nt ID: LACHAT3		1	20 mL	20 mL	403977	10/02/15 10:37	JER	TAL SAV
Total/NA	Analysis Instrume	410.4 nt ID: SPC3		1	2 mL	2 mL	403503	09/30/15 09:42	JRJ	TAL SAV
Total/NA	Analysis Instrume	SM 2540D nt ID: NOEQUIP		1	250 mL	1000 mL	402720	09/24/15 12:57	KLD	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



#### TestAmerica Savannah

5102 LaRoche Avenue

Page 15 of 17

### **Chain of Custody Record**



Savannah, GA 31404 Phone (912) 354-7858 Fax (912) 352-0165

Fildile (912) 334-7036 Fax (512) 332-0103																						
Cilent Information	Sampler:  Talks Phone.  276-677-	Musley		K€		sey, Michele R						Carrier Tracking No(s).					COC №. 680-66522-28529.1					
Client Contact Ms. Sandra Warner	Phone. 0 276-627-	3 <i>23</i> 0			<sub>Marl.</sub> ichele	nl. nele.kersey@testamericainc.com											Page Pag	e 1 of 1				
Company Solutia Inc.									Λ	nalv	eie I	Pari	este	d				Job #	ŧ.			
Address,	Due Date Request	ed:			¥ } L	414	7	1	T	lialy	313 1	Kequ	16216	iu .	1		[;;]	Pres	servation C	odes:	_	
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State, Zip. VA 24060					1		3												Vitric Acid NaHSO4		a204S a2SO3	
Phone	PO#				-11		\$					ł						F-N	/leOH Amehlor		a2S2SO3	
Email:	See Project Not	es for 2015	PO				948												Ascorbic Acid	T-T8	SP Dodecahy cetone	ydrate
swamer@chacompanies.com					3.0		45	율		tte				İ				J-D	Water	V - M	CAA	
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			Sample	Matrix (W=water,			365.4,	2540D - Total	₩ ₩	Nitrogen, Nitrate+Nitrite				1			Nombe					
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Sample Identification	Sample Date	Time	G=grab)	ST=Tisque, A=A			g 6	1 2		363.2	s : 13 y	125 2 2 4 5	reswa:	1016120	1000	15315151	13	<b>'</b> I	Special	Instruct	tions/Note	e:
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### **Login Sample Receipt Checklist**

Client: Solutia Inc.

Job Number: 680-117005-1

List Source: TestAmerica Savannah

Login Number: 117005

List Number: 1

Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

N/A

112

Residual Chlorine Checked.

### 13

### **Certification Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117005-1

Laboratory	<b>TestAmerica</b>	Savannah
Labulatuly.	I CSLAIIICIICA	Savailliali

The certifications listed below are applicable to this report.

ΓΑ	uthority	Program	EPA Region	Certification ID	Expiration Date
⊽	irginia	NELAP	3	460161	06-14-16



Improving the environment, one client at a time...

REI Consultants, Inc. PO Box 286 Beaver, WV 25813

TEL: (304) 255-2500 Website: www.reiclabs.com

3029-C Peters Creek Road Roanoke, VA 24019 TEL: 540.777.1276

101 17th Street Ashland, KY 41101 TEL: 606.393.5027

1557 Commerce Road, Suite 201 Verona, VA 24482 TEL: 540.248.0183

16 Commerce Drive Westover, WV 26501 TEL: 304.241.5861

Tuesday, September 29, 2015

Mr. John Martinez CP FILMS, INC. P.O. BOX 5068 MARTINSVILLE, VA 24115

(276) 627-3373 TEL: FAX: (276) 627-3009

RE: CP FILMS

Work Order #: 1509Q60 Dear Mr. John Martinez:

REI Consultants, Inc. received 2 sample(s) on 9/22/2015 for the analyses presented in the following report.

Sincerely,

**Scott Gross** 

Project Manager



### **REI Consultants, Inc. - Case Narrative**

WO#: 1509Q60

Date Reported: 9/29/2015

Client:

CP FILMS, INC.

**Project:** 

**CP FILMS** 

The analytical results presented in this report were produced using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. Verification of required sample preservation (as required) is recorded on associated laboratory logs. Any deviation from compliance or method modification is identified within the body of this report by a qualifier footnote which is defined at the bottom of this page.

All sample results for solid samples are reported on an "as-received" wet weight basis unless otherwise noted.

Results reported for sums of individual parameters, such as TTHM and HAA5, may vary slightly from the sum of the individual parameter results, due to rounding of individual results, as required by EPA.

The test results in this report meet all NELAP and/or VELAP requirements for parameters clearly designated as PA, VA, PAVA, or VELAP in the column labeled NELAP.

Please note if the sample collection time is not provided on the Chain of Custody, the default recording will be 0:00:00. This may cause some tests to be apparently analyzed out of hold.

All tests performed by REIC Service Centers are designated by an annotation on the test code. All other tests were performed by REIC's Main Laboratory in Beaver, WV.

This report may not be reproduced, except in full, without the written approval of REIC.

#### DEFINITIONS:

MCL: Maximum Contaminant Level

MDL: Method Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Ma/Kg or mg/L: Units of part per million (PPM) - milligram per Kilogram (weight/weight) or milligram per Liter (weight/volume).

NA: Not Applicable

ND: Not Detected at the PQL or MDL

PQL: Practical Quantitation Limit; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below PQL are reported either as ND or as a number with a "J" qualifier.

Qual: Qualifier that applies to the analyte reported.

TIC: Tentatively Identified Compound, Estimated Concentration denoted by "J" qualifier.

Ug/Kg or ug/L: Units of part per billion (PPB) - microgram per kilogram (weight/weight) or microgram per liter (weight/volume).

#### QUALIFIERS:

- X: Reported value exceeds required MCL
- B: Analyte detected in the associated Method Blank at a concentration > 1/2 the PQL
- E: The sample result is within the method accepted Linear Dynamic Range determined by the lab for this analysis. However, it may be considered estimated when applying the TNI (The NELAC Institute) standard.
- H: Holding time for preparation or analysis has been exceeded.
- J: Analyte concentration is reported, and is less than the PQL and greater than or equal to the MDL. The result reported is an estimate.
- S: % REC (% recovery) exceeds control limits

#### **CERTIFICATIONS:**

Beaver, WV: WVDHHR 00412CM, WVDEP 060, VADCLS 00281, KYDEP 90039, TNDEQ TN02926, NCDWQ 466, PADEP 68-00839, VADCLS

Bioassay (Beaver, WV): WVDEP 060, VADCLS(VELAP) 460148, PADEP 68-00839

Roanoke, VA: VADCLS(VELAP) 460150 Verona, VA: VADCLS(VELAP) 460151 Ashland, KY: KYDEP 00094, WV 389

Morgantown, WV: WVDHHR 003112M, WVDEP 387

# **REI Consultants, Inc. - Analytical Report**

WO#: 1509Q60

Date Reported: 9/29/2015

Client:

CP FILMS, INC.

**Collection Date:** 

9/21/2015 4:30:00 PM

Project:

CP FILMS

Date Received:

9/22/2015

Lab ID:

Matrix:

1509Q60-01A

Liquid

Client Sample ID:

STORMWATER OUTFALL 005

Site ID:

Analysis	Result	MDL	PQL	MCL Qual	Units	Prep Date I	Date Analyzed	IELAC
BOD, 5 Day, 20°C		,		Method: SM5	210 B-200	1	Analyst: VF	₹
Biochemical Oxygen Demand	3	NA	2	1,000	mg/L	09/23/15 8:52AM	09/28/15 7:52AM	PA/VA

Notes:

The dilution water blank associated with this sample was outside laboratory control limits. The reported result may be biased high.

## **REI Consultants, Inc. - Analytical Report**

WO#: 1509Q60

Date Reported: 9/29/2015

Client:

CP FILMS, INC.

**Collection Date:** 

9/21/2015 4:30:00 PM

Project:

**CP FILMS** 

**Date Received:** 

9/22/2015

Lab ID:

1509Q60-02A

Matrix:

Liquid

Client Sample ID:

STORMWATER OUTFALL 007

Site ID:

Result MDL PQL **Analysis MCL Qual** Units Prep Date Date Analyzed NELAC

Analyst: VR BOD, 5 Day, 20°C Method: SM5210 B-2001

mg/L 09/23/15 8:52AM 09/28/15 7:55AM PA/VA 2 1,000 Biochemical Oxygen Demand 5 NA

Notes:

The dilution water blank associated with this sample was outside laboratory control limits. The reported result may be biased high.



Improving the environment, one client at a time...

REI Consultants, Inc. PO Box 286 Beaver, WV 25813 TEL: (304)255-2500

Website: www.reiclabs.com

# Sample Receipt Checklist

Client Name:	CPF001		Work	Order Number:	1509Q60
RCPNo:	1 Date and Time Received:	9/22/2015 8:40:	<b>16 PM</b> R	Received by:	Anthony Sisk
Completed By:	Anthony Sisk	Reviewed By:	Scott Gr	oss	
Completed Date:	9/22/2015 8:46:02 PM	Reviewed Date:	9/23/201	5 4:19 AM	
Carrier Nan	ne: REIC		_	. <u></u>	
1. Chai	n of custody present?		Yes x	No 🗆	
2. Chai	n of custody signed when relinquished and received?		Yes x	No 🗌	
3. Are r	matrices correctly identified on Chain of custody?		Yesx	No 🔲	
4. Is it	clear what analyses were requested?		Yes x	No 🗌	
5. Cust	ody seals intact?		Yes 📙	No L	Not Present x
6. Sam	ples in proper container type and preservative?		Yes x	No □	
7. Were	e correct preservatives noted on COC?		Yes x	No 📙	NA 📙
8. Sam	ple containers intact?		Yes x	No 🔲	
9. Suffi	cient sample volume for indicated test?		Yes x	No 🔲	
10. Were	e container labels complete?		Yes x	No 🔲	
11. All sa	amples received within holding time?		Yes x	No 🗌	
12. Was	an attempt made to cool the samples?		Yes x	No	NA 📙
13. Sam	ple Temp. taken and recorded upon receipt?		Yesx	No 🗌	To 5.8 ℃
14. Wate	er - Were bubbles absent in VOC vials?		Yes 🗌	No 🗌	No Vials x
15. Are 9	Samples considered acceptable?		Yes x	No 🗌	
16. cod	C filled out properly?		Yesx	No 🔲	
Oliant N	- 4!5! 4! ID				
Client N	otification/Response				
Client Name	e: CPF001		W	ork Order Numl	per: 1509Q60
Comment:					
Client Conta	acted: Yes No NA X	Person Co	-tostod:		
Contact Mod	H	In Person:	ntacted.		
Date Contac	ted: Cor	ntacted By:			
Regarding:					
Client Instru	tions:				
Corrective A	ction:				

CHAIN OF CUSTO	DV REC	ORD (	lient: C	P Films											
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		,		O. Box 50									sville	State_VA	Zip 24115
W Link Ki		ŧ	Bill ng Addres	s (if different)											
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Research Environmental & Industrial	Consultants, Inc.		PU	RCHASE ORDE	R #										
CORPORATE HEADQUARTERS: P.O. Box 286 36 225 Industrial Park Rd R Beaver, WW 25813 56 800-999-0105 • 304-255-2500 56 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	RUSH 3 DAY	ST  FURNAROUND  AY 2 DAY	O 1 DAY	AMALYCIS & METHOD REDUESTED		ВОО	Pro	ject ID	CP	Film	S		Sampler T Mos	iley	
SAMPLEID	No. & Type of	Sampling Date/	Matrix	Sample Comp/Grab	Ī			T	T	T	T	7	ENTER PRESERVATION		odium Thiosulfate
Storm water Outfall 005 & 007	2 Plastic	9/21/15-4:30	Water	Grab	×								1 Hydrochloric Acid		odium Hydroxide nc Acetate
			Other (note is	n Choose									3 Sulfuric Acid	7 [[	
		23.00	Other (note i	n Choose									COMMENTS:	_	
	1		Other (note i	n Choose									Grab Sample and 007.	s from c	outtalls 005
COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN COLUMN CO			Choose	Choose									and our.		
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TestAmerica Savannah 5102 LaRoche Avenue Savannah, GA 31404

Tel: (912)354-7858

TestAmerica Job ID: 680-117008-1

Client Project/Site: Solutia VPDES Outfall Martinsville VA

For:

Solutia Inc.

1116 South Main St.

Blacksburg, Virginia 24060

Attn: Ms. Sandra Warner

Michael RKusey

Authorized for release by: 10/7/2015 4:04:48 PM

Michele Kersey, Project Manager I (912)354-7858 michele.kersey@testamericainc.com

.....LINKS .....

Review your project results through

IOIDIACCESS

Have a Question?



Visit us at: www.testamericainc.com The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

# **Definitions/Glossary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

### Qualifiers

### **General Chemistry**

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
n	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# **Sample Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

		· · · · · · · · · · · · · · · · · · ·		
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-117008-1	VPDES Outfall 002	Water	09/21/15 09:30	09/23/15 08:10

### **Case Narrative**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

Job ID: 680-117008-1

Laboratory: TestAmerica Savannah

Narrative

### **CASE NARRATIVE**

Client: Solutia Inc.

Project: Solutia VPDES Outfall Martinsville VA

Report Number: 680-117008-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

#### RECEIPT

The sample was received on 9/23/2015 8:10 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

#### OIL AND GREASE AND TPH

Sample VPDES Outfall 002 (680-117008-1) was analyzed for Oil and Grease and TPH in accordance with EPA Method 1664A. The samples were prepared and analyzed on 09/24/2015.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with 402659.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **CHEMICAL OXYGEN DEMAND**

Sample VPDES Outfall 002 (680-117008-1) was analyzed for chemical oxygen demand in accordance with SM 5220D. The samples were analyzed on 09/30/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **TOTAL ORGANIC CARBON**

Sample VPDES Outfall 002 (680-117008-1) was analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/02/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TestAmerica Savannah

# **Client Sample Results**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

Client Sample ID: VPDES Outfall 002

Lab Sample ID: 680-117008-1

Date Collected: 09/21/15 09:30 Matrix: Water

Date Received: 09/23/15 08:10

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	5.1	Ū	5.1	1.4	mg/L		09/24/15 08:23	09/24/15 10:56	1
Chemical Oxygen Demand	9.6	J	10	5.0	mg/L			09/30/15 09:42	1
Total Organic Carbon	2.4		1.0	0.50	mg/L			10/02/15 20:56	1

# **QC Sample Results**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

Lab Sample ID: MB 680-402595/14 Matrix: Water Analysis Batch: 402659		***							•	Clie		ole ID: Methoo Prep Type: T Prep Batch:	otal/N/
Analyte		MB Qualifier		RL		MDI	Unit		D	Pr	repared	Analyzed	Dil Fa
Oil & Grease	5.0	•	_	5.0			mg/L				4/15 08:23		
Lab Sample ID: LCS 680-402595/19 Matrix: Water Analysis Batch: 402659	5-A		0		1.00	1.00		Cli	ent	San		Lab Control Prep Type: T Prep Batch:	otal/N
Amalusa			Spike Added		LCS Result			Unit		_	%Rec	%Rec. Limits	
Analyte Oil & Grease			40.0		32.6	wua	er	mg/L		_	82 -	78 - 114	
Analyte Dil & Grease			40.0		Result 33.4	Qua	lifier	Unit mg/L		<b>D</b>	84	78 - 114 RP	D Lin
lethod: 5220D-2011 - Chemic Lab Sample ID: MB 680-403503/3 Matrix: Water Analysis Batch: 403503			emand							Clie		ole ID: Metho Prep Type: T	
		MB Qualifier		RL	ı	MDL	Unit		D	Pı	repared	Analyzed	Dil F
Analyte	Result						mg/L		-		•	09/30/15 09:42	
	Result 10		_	10		5.0	mg/L						
Analyte Chemical Oxygen Demand Lab Sample ID: LCS 680-403503/4 Matrix: Water Analysis Ratch: 403503				10		5.0	mg/L	Cli	ent	Sar		Lab Control Prep Type: T	
Chemical Oxygen Demand  Lab Sample ID: LCS 680-403503/4			Spike	10	LCS	LCS		Cli	ent	Sar			

Method: 9060A -	Organic Carbon	, Total (ˈ	TOC)
-----------------	----------------	------------	------

Chemical Oxygen Demand

Lab Sample ID: MB 680-404503/3 Matrix: Water							Client Sam	Prep Type: To	
Analysis Batch: 404503	MB	мв							
		Qualifier	RL	MDL	-	<u>D</u>	Prepared	Analyzed 10/02/15 19:05	Dil Fac
Total Organic Carbon	1.0	U	1.0	0.50	mg/L			10/02/15 19.05	ı

52.9

mg/L

50.0

Lab Sample ID: LCS 680-404503/5 Matrix: Water				Client	Sam	ple ID	: Lab Control Sample Prep Type: Total/NA
Analysis Batch: 404503	Spike	LCS	LCS				%Rec.
Analyte Total Organic Carbon	Added 20.0	Result	Qualifier	Unit ma/l	D .	%Rec	Limits

### Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

General	Chem	istry
---------	------	-------

Prep Batch: 402595	Pren	Batch:	402595
--------------------	------	--------	--------

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117008-1	VPDES Outfall 002	Total/NA	Water	1664A	
LCS 680-402595/15-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 680-402595/16-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 680-402595/14-A	Method Blank	Total/NA	Water	166 <b>4</b> A	

**QC Association Summary** 

### Analysis Batch: 402659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117008-1	VPDES Outfall 002	Total/NA	Water	1664A	402595
LCS 680-402595/15-A	Lab Control Sample	Total/NA	Water	1664A	402595
LCSD 680-402595/16-A	Lab Control Sample Dup	Total/NA	Water	1664A	402595
MB 680-402595/14-A	Method Blank	Total/NA	Water	166 <b>4</b> A	402595

### Analysis Batch: 403503

Lab Sample I	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-117008-1	VPDES Outfall 002	Total/NA	Water	5220D-2011	
LCS 680-4035	03/4 Lab Control Sample	Total/NA	Water	5220D-2011	
MB 680-40350	3/3 Method Blank	Total/NA	Water	5220D-2011	

### Analysis Batch: 404503

	Lab Sample ID 680-117008-1 LCS 680-404503/5	Client Sample ID VPDES Outfall 002 Lab Control Sample	Prep Type Total/NA Total/NA Total/NA	Water Water Water Water	9060A 9060A 9060A	Prep Batch
ł	MB 680-404503/3	Method Blank	Total/NA	Water	9060A	

### Lab Chronicle

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

Lab Sample ID: 680-117008-1 Client Sample ID: VPDES Outfall 002

Date Collected: 09/21/15 09:30 Date Received: 09/23/15 08:10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1664A			486 mL	500 mL	402595	09/24/15 08:23	ALS	TAL SAV
Total/NA	Analysis	1664A int ID: NOEQUIP		1	486 mL	500 mL	402659	09/24/15 10:56	ALS	TAL SAV
Total/NA	Analysis Instrume	5220D-2011 ent ID: SPC3		1	2 mL	2 mL	403503	09/30/15 09:42	JRJ	TAL SAV
Total/NA	Analysis Instrume	9060A ent ID: TOC7		1	40 mL	40 mL	404503	10/02/15 20:56	KMB	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

# **Certification Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

Laboratory: TestAmerica Savannah
The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Virginia	NELAP	3	460161	06-14-16

# **Method Summary**

Client: Solutia Inc.

Project/Site: Solutia VPDES Outfall Martinsville VA

TestAmerica Job ID: 680-117008-1

Method	Method Description	Protocol	Laboratory
1664A	HEM and SGT-HEM	1664A	TAL SAV
5220D-2011	Chemical Oxygen Demand	SM	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL SAV

#### **Protocol References:**

1664A = EPA-821-98-002

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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TAL8240-680 (1008)

Page 11 of 12

## **Login Sample Receipt Checklist**

Client: Solutia Inc.

Job Number: 680-117008-1

List Source: TestAmerica Savannah

Login Number: 117008

List Number: 1

Creator: Kirkland, Keyon A

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Date of last measurable rain event: <72 Hrs Hours since last measurable rain event: <72 Hrs							
Date: 7/28/15 Stor	rm Start Time: 17:50 Storm End Time: 20:20 Quantity of Rain (inches	s): 2.1					
Total Discharge Volume: 345,000 gallons Maximum Flow Rate: (4900 gallons per minute							
OUTFALL 5:							
Grab Sample: Time Collected: 18:00 Sampler's Signature: Jeldy Mosly							
Temperature: 64.2 °F	Time of Analysis: 18:05 Analyst's Signature: July Mosly						
pH: 7.08 S.U. Time of Analysis: 18:10 Analyst's Signature: July Maly							
Tot. Res. Cl <sub>2</sub> : N/A mg/L	Time of Analysis: 18:15 Analyst's Signature: Idly Muly						
Flow-weighted Composite	e Sample:						
Time:18:00	Level: Half Pipe Flow: 3, 700gpm Vol. of Subsample: 1000						
Time: 18:15	Level: 3/4 Pipe Flow: 6,200gpm Vol. of Subsample: 1500	)					
Time:18:30	Level: Half Pipe Flow: 3,700 Vol. of Subsample: 100	0					
Time:18:45	Level: Half Pipe Flow: 3700 Vol. of Subsample: 10	00					
Time:19:00	Level: 1/4 Pipe Flow: 1 000 yrm Vol. of Subsample: 50	0					
Time:19:15	Level: 1/4 Pipe Flow: 1000gpm Vol. of Subsample: 5	500					
Time:19:30	Level: 1/4 Pipe Flow: \ \ 000mm Vol. of Subsample: 5	000					
Time: 19:45	Level: 1/4 Pipe Flow: 1,000cm Vol. of Subsample: 5	500					
Time:20:00	_ Bever	500					
Time: 20:15	Level: Dripping Flow: 40 mm Vol. of Subsample: 50	)					
Time:20:30		50					
Length of composite sample (time): 2.5 hours  TOTAL VOLUME COLLECTED: 7.10 liters							
Sampler's Signature: Jelly Worly Comments:							
3700 x 3 × 15 min = 166,500 gallons 7 6800 x 1 × 15 min = 102,000 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gallons (= 344,700 gal							

Date of last measurable rain event: <72 Hrs Hours since last measurable rain event: <72 Hrs							
Date: 7/28/15 Storm	Start Time: 17:50 St	orm End Time: 20:20 Quantity of Rain (inches): 21					
Total Discharge Volume: N 258,000 gallons Maximum Flow Rate: 3,700 gallons per minute							
OUTFALL:							
Grab Sample: Time Collected: 18:00 Sampler's Signature: 18:00							
Temperature: _68.9 °F	Time of Analysis: 18:0	5 Analyst's Signature: Joley Mesly					
pH: <u>6.97</u> S.U.	Time of Analysis: 18:	O Analyst's Signatures July Mosty					
Tot. Res. Cl <sub>2</sub> : N/A mg/L	Time of Analysis: 18:	15 Analyst's Signature: July Mory					
Flow-weighted Composite	Sample:						
Time:18:00	Level: Half Pipe Flo	w: 3,700 gpm Vol. of Subsample:					
Time: 18:15	Level: Half Pipe Flo	w: 3,7005pm Vol. of Subsample: 1000					
Time: 18:30	Level: Half Pipe Flo	w: 3,708 yrm Vol. of Subsample:					
Time:18:45		w: 1,000 m Vol. of Subsample: 500					
Time:19:00	Level:1/4 Pipe Flo	w: 1,000 spm Vol. of Subsample: 500					
Time:19:15	Level:1/4 Pipe Flo	w: 1,000gpm Vol. of Subsample: 500					
Time:19:30	Level: 1/4 Pipe Flo	w: 1000 gpm Vol. of Subsample: 500					
Time:19:45	Level:1/4 Pipe Flo	w: 1,000 Pm Vol. of Subsample: 500					
Time: 20:00	Level:1/4 Pipe Flo	w: 1,000gpm Vol. of Subsample: 500					
Time:20:15	Level: Dripping Flo	w: 40gpm Vol. of Subsample: 50					
Time:20:30	Level: Dripping Flo	w: 40 gpm Vol. of Subsample: 50					
Length of composite sample (time): 2.5 hours  TOTAL VOLUME COLLECTED: 6.10 liters							
Sampler's Signature: July Mary Comments:							
2700 X 3 X 15 mil = 1/0/0, 500 gallors 7							

3700 X 3 X 15 mi1 = 166,500 Jallon 7 1000 x 6 x 15 min = 90,000 gallon 257,700 40 x 2 x 15 min > 1,200 gallons

CILA

Date of last measurable rain event: 9/12/15 Hours since last measurable rain event: 0.18							
Date: 9/21/2015 Storm Start Time: 04:00 Storm End Time: 09:15 Quantity of Rain (inches): 0.6							
Total Discharge Volume:	Unknown gallons	s Maximum Flo	ow Rate: gallons per minute				
OUTFALL 005:							
Grab Sample: Time Collect	nature: Teddy Mosley July Musty						
Temperature:°F	Time of Analysis: 04	4:20 Analyst's Sign	Analyst's Signature: Teddy Mosley Ledy Maly				
pH: <u>6.01</u> S.U.	Time of Analysis: 04	Analyst's Sign	nature: Teddy Mosley Lidely Mioly				
Tot. Res. Cl <sub>2</sub> : N/A mg/L	Time of Analysis:N	Analyst's Sign	nature: N/A				
Flow-weighted Composite Sample:							
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Time:	Level:	Flow:	Vol. of Subsample:				
Length of composite sample (time):  TOTAL VOLUME COLLECTED:							
Sampler's Signature: July Wlusly Comments: Grab Sample Approx. 2 Gallon							



Date of last measurable rain event: 9/12/2015 Hours since last me			since last measurable rain event: 0.18
Date: 9/21/2015 Storm Start Time: 04:00 Storm End Time: 09:15 Quantity of Rain (inches): 0.6			
Total Discharge Volume:	gallo	ons	Maximum Flow Rate: gallons per minute
OUTFALL 007:			
Grab Sample: Time Collected: 04:15			Sampler's Signature: Teddy Mosley July Muy
Temperature:oF	Time of Analysis:	04:25	_Analyst's Signature: Teddy Mosley בעל און אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אייען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אינען אייען אינען אינען אינען אינען אינען אינען אינען אינען אייען אינען אינען אינען איין אייען אייען אייען אייען אייען אייען אייען אייען
pH: <u>6.41</u> S.U.	Time of Analysis:	04:25	Analyst's Signature: Teddy Mosley July What
Tot. Res. Cl <sub>2</sub> : N/A mg/L	Time of Analysis:	N/A	_Analyst's Signature:N/A
Flow-weighted Composite Sample:			
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Time:	Level:	_ Flow:	Vol. of Subsample:
Length of composite sample (time):  TOTAL VOLUME COLLECTED:			
Sampler's Signature: Aut Muly Comments: Grab Sample Approx. Gallon			

